SL-II MC-117/1
Time: 23:47 CDT, 1:15:47 GET
5/27/73

CC Skylab, Houston. How do you read?
CDR Loud and clear (garble).
CC Okay. We're a little bit garbled. I'd like to talk about maneuvering here a little bit if I could, to Joe.
SC (Garble)
CC Roger. We are prepared to put a maneuver to try to reacquire solar inertial and there's some confusion on our part about whether we should go plus or minus Y. We understood you to say plus Y awhile ago. We think it's minus. Will you confirm that?
SPT Okay, let's talk about it. Maybe I'm getting it wrong. It would appear to take - to require a pitch above the Y axis. I was going to say toward the CSM, if that makes any sense to you. As I stand facing the CSM and look up the Z-axis, the Sun is forward of the zenith. It's - in other words, it's between the plus-Z axis and the plus-X axis.
CC Okay, that's a plus-Y. That - we got up there on the top of the MDA - we got the plus-Y axis indicated and that still sounds like a plus-Y rotation to us.
SPT Well, I thought it was. What have you got for X?
CC Okay, about plus 15 degrees.
SPT That sounds right.
CC Let's go back and review that again. You say the Sun is between the CSM and the ATM?
SPT Yes. That's right.
CC That's a negative-Y rotation.
CC You're right, you're right. Okay, it is a plus-Y rotation.
SPT Nyaaa nyaaa.
CC Okay. Okay, what we're going to do is put in a plus-Y rotation of 40 degrees and a plus-X rotation of 15 degrees. We got a maneuver time on it of 15 minutes. If we don't hack it this time we'll probably suggest turning it over to you. And before you would ever try to do it, you would need to - before you ever select solar inertial mode, you need to make sure that you put in a command to initialize your strap-downs because they're way off right now.
SPT Understand.
CC And for Pete or Paul, I guess maybe we'd like to ask a question. Is there any reason that duct 1 flow would be down now. We've got a substantial drop in it.
SPT (Garble) MDA. Oh, duct 1. No, not that I know of. I can go check it if you want.
SPT Talking about duct 1 in the workshop, right?

CC That's affirm.
SPT We didn't do anything. I'll go check it.
SPT If you're ready, let me give you a status of our ECS, all right?
CC Okeydoke, go ahead.
SPT Okay, we presently are running both condensing heat exchangers A, and mol sieve A and B. We just finished a condensate dump into the waste tank. We have two ducts. Ducts 1 and 2 were running in the workshop. We got the airlock module duct fan on HIGH with all the mol sieve air going to the workshop through that diverter valve. We've got the MDA fans on low, the CSM fans on low, and the three AM circ fans we just turned on about 5 minutes ago on LOW.
CC Okay, we copy. We got all four fans running in ducts 1 and 2. Is that affirm?
SPT Hell I turned them on. I'll go check.
CC Okay.
SPT You still want to leave just ducts 1 and 2, leave 3 off, right?
CC That's affirm.
SPT Okay. You say duct 2 is the low one?
CC Negative. Duct 1.
SPT Okay.
CC Rog, Joe. We have initiated a new one now. And it might be - if you got time, it might be wise to take a look out and see. Looks like we're going the right direction.
SPT Roger.
CC And CDR, Houston. If you got a chance, I guess maybe we'd like to get an idea about how much longer you guys are planning on working.
CDR I'm trying to make dinner. I don't think we're going to work very much longer. I would like to go to bed, but everytime we do, something comes up. Duct 1 for 600 plus; CSM.
CC Roger, understand. Duct 1 600 plus; CSM.
CDR Duct 2 (garble) 550 and duct 3 (garble) 75; CSM.
CC Roger, copy.
CDR And, Crip, as soon as we get into sunshine, I'll give you a hack on the maneuver. I guess it'll be gone by then.
CC Roger. Also be advised that we're starting to get a lot of feedback out of those SIAs. If you might could do a little adjustment. I don't know whether it's ringing there or not.
CDR Yeah, it is.
CDR Hey, Crip, how much temperature skid drop are you getting. Does it really look like that the shield's working?

SL-II MC-117/3
Time: 23:47 CDT, 1:15:47 GET
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CC That's affirm. It looks like it's really coming down. Did you hear my last call back when we were - at Guam I gave you a call that we'd dropped 70 degrees.

CC That's skin temp. I'll probably get a hack for you - what the workshop temperature inside - what we think it is. Okay, the next pass is going to be coming up at Ascension at 05:00. And would you like us just to forget that call?

CDR No, we're eating. We're trying to get to bed. I think that everybody shouldn't worry too much if we slipped a day, around here a little bit. Let us sleep in in the morning. (Garble) We're hanging in there. We've had a lot of (garble) come up today. You know - kind of held us back.

CC Rog, Pete. I'm getting an awful lot of feedback there still. We're going to have LOS in about 1 minute. We will give you a call at Ascension and I understand that your recommendation is you'd like to sleep in tomorrow.

CC And we concur.

CC And we would like to make sure that we have the VTR MAIN POWER switch left on because we want to dump it and take a look at that dump - parasol deployment - parasol, rather.

CDR Okay, Crip, and how's that on the squeal now? That should be a little bit better. We've com- pleted everything today, but with all the rest of the little master alarms and the few things that came up, we're running a little behind. We'll sleep in. We'll press on with the day - just like it is in the book and hopefully we can catch up. You know, somewhere along in there and then we'll screw our day back around to the right time.

CC Rog, Pete. You're doing a fantastic job. (garble) sleep in.

CDR and besides that (garble) completed (garble).

PAO This is Skylab Control. We have loss of signal at Vanguard. The spacecraft is now traveling over the ocean on rev 181. We'll have acquisition of signal again at Ascension in about 3 minutes. During the conversation, one of the important points that was brought up is the pitch maneuver that has now been commanded at Vanguard. There was some question in the minds of flight controllers as to whether the crew had indicated that the craft was pitched up in their opinion or pitched down. And there was a question here whether they should do a 40 degree maneuver in one direction or the other. They did clarify that. The indication is that the crew - from the crew that there was a pitch up and we are pitched up 40 degrees, so we are now in the process of pitching down and we're also doing a roll of 15 degrees. And hope that we can get the spacecraft properly in solar inertial mode. They are not absolutely certain that 15 degrees is the right number, but

it gives them a fairly wide range of latitude. They know that it's something a little over 10 and 15 should get them well within range and they have a range of about 9 degrees. They also indicated that there are figures here on - from telemetry data was that we had a 75 cubic feet per minute air flow through duct 1 in the orbital workshop. However, visual inspection there indicated that that indicator was not reading properly. And we have a 600 cubic feet per minute reading which is a proper reading for that duct with four fans operating. Some of the noise you may have noticed earlier was feedback from a speaker intercomm and they did clarify that. They reduced the sound levels there and we got good clear voice after that. No figures yet on what the temperatures are inside the orbital workshop. It's about 70 degrees reduction in temperature on the outside of the workshop, but the inside of the workshop still has it's temperatures now leveling out, all at off-scale high. As you know before we had a lot of temperatures that were below 120 degrees because of their location, but once you have air flowing that 120 degree level is now pretty well spread throughout the workshop with the exception of a couple of temperature scales. Crew is presently eating and trying to get ready for bed. They have now been given an okay to sleep in in the morning. There will be no wakeup call given, and they may be asleep promptly after this Ascension pass which is now 50 seconds away. This again puts them a little bit behind the Flight Plan, but they hope to catch up in the next couple of days. This won't be a problem now that they have the major task fultilled. This is Skylab Control. We'll be staying live now. In 36 seconds you should hear acquisition of signal at Ascension. The Ascension pass is about a 9-minute and 48-second pass. And that's now just 27 seconds away. They should be finalizing because after that we have a period of over 40 minutes before we have acquisition of signal again at Guam. And during that period we would expect them to have gone to sleep. This is Skylab Control.

CC — Skylab, Houston. We're AOS over Ascension for the next 10 minutes.

CDR — Rog. Have you all found the Sun yet?

CC — We're waiting for you to tell us.

CDR — Did you get my (garble) on the first Skylab record?

CC — Negative. You faded out there. Which of the - -

CDR — CDR is faded from a dredge airlock completing a complete 360 going through the OWS dome hatch without touching anything and not contacting till in the middle of the airlock. That's as far as we've made it so far. In our world breaking record attempt to go for the dredge airlock through locker AA the command

module without touching anything. Seeing who can complete the most 360.

CC Roger. Sure like to see that on TV sometime.

CDR Well, we'll work it for you. Just let us get the rest of the things squared away. We've just kind of practicing enroute going back and forth during our busy pass.

PAO Skylab Control. We have 1 minute and 18 seconds before daylight for the crew.

CC Skylab, Houston. Be advised that we didn't make out very well on trying to find the Sun. And I guess if you guys would like to give it a go, we would appreciate it.

CDR Okay. It looks like we're a good bit off at X.

CC How does Y look?

CDR Well, we overshot.

CC Okay, we got a couple more minutes left here. The next pass is not going to be until Guam at 05:46 and we don't plan on giving you a call for that one. If you're still up and you need us for some reason, well go ahead and give us one. It's 05:46.

CDR 46. Okay, Crip. Crip, meal status report for the food people. The CDR ate everything today except his asparagus for dinner. The SPT ate everything. The PLT ate everything except the white bread and the macaroni and cheese at dinner time. We think we got all the drinks, but to tell you the truth we're really not sure because the packing on these command module meals is strange and it's hard to find everything.

CC Rog, we copy.

CC Okay, we are 1 minute to LOS.

CC And, Joe, we would like to remind you once more about the strapdown initialization, because it will be all fouled up when and if you do find it.

CDR Understand.

CC Okay, guys. I'll see you in a couple of days here.

CDR Okay.

PAO This is Skylab Control at 5 hours 10 minutes and 50 seconds Greenwich mean time. We have lost signal now at the Ascension tracking station as the spacecraft is going on it's 181 revolution traveling over the African - center part of Africa and then up over the Soviet Union. And during the past conversation they indicated that we did not - looking at our data coming back from the ATM on battery charge, we noticed that

we did not have the Sun. We're not getting the kind of data that we would expect when we have the Sun directly over the ATM. That means that we did not reach solar inertial which is what we've been trying to find. At that - at the time we do reach solar inertial we do a procedure call initializing strapdown which is essentially telling the gyros the attitude control system, that you now have the Sun directly overhead and then any variation from that will be recorded by the computers. Since we didn't - although we didn't get that we also have initialized strapdown, and we've informed the crew that they should now try to find the Sun. They are in a much better position to do it since they do have a visual refereuces. And they'll be trying to reach the - get the Sun directly over the ATM and then they will again initialize strapdown. And at that time we will have solar inertial and hopefully the attitude problems will be entirely cleared up. The crew will be doing that before they go to sleep. We will not call the crew at Guam which is our next station in approximately 34 minutes and a half. But we may hear from them again if they are still up and are still working, and that's still a possibility. Still no idea of what the temperatures are in the inside of the orbital workshop because they have not yet come on scale at a 120 degrees. They should be doing that during the night and we expect to see something on that a little bit later. The external temperatures on the vehicle are substantially lower than they were earlier. This is Skylab Control. We'll be back up again on the hour or at the time we have acquisition of signal at Guam. Time now is 5 hours 12 minutes and 48 seconds Greenwich mean time.

END OF TAPE

SL-II MC-118/1
Time: 00:44 CDT 01:16:44 GET
5/27/73

PAO This is Skylab Control at 5 hours 44 minutes and 37 seconds Greenwich mean time. And we'll have acquisition of signal at Guam tracking station in about a minute and 50 seconds, possibly a little bit earlier, and at the Guam tracking station we may hear from the crew. We have no intention of calling up to them, although we may hear from them, if they're not yet asleep. Television video tape during parasol deployment earlier today, about 6 minutes of it will be transmitted to the tracking station at Guam during this pass at - We now have telemetry from Guam just announced. The television vidio tape will be held at Guam until 1:50 a.m. central daylight time, at which time it will be relayed by communication satellite to Johnson Space Center. And that will be about 6 minutes, beginning at 1:50 a. m. central daylight time. We'll have AOS any second. Flight Controllors announced that they have found the Sun, the ATM is correctly aligned for solar inertial. That's good news on attitude control for every body here. This is Skylab Control, and we'll be quieting down now, until we hear from the crew.

PAO Skylab Control. It appears still that we will not hear from the crew during this pass, which may indicate that they've already decided to tuck in for the night. For the first time we're getting to get some of the temperature sensors in that orbital workshop back on scale. Temperature sensors in the experimental compartment ceiling are now reading 119.6 degrees and 116.6 in another location in the same area. The wardroom ceiling, which has stayed on scale during the night had been reading 113, and that's a little higher than before, and that's because of the air flow in that and the orbital workshop. During the night we expect to see most of those off scale high readings come back on scale of 120 degrees or below. This is Skylab Control. We still have 3 minutes and 40 seconds before LOS, and we'll come up again after we have lost signal.

CT Guam Com Tech. Houston Com Tech Net 1.
CT Guam Com Tech Net 1
CT I'm reading you loud and clear.
CT I read you loud and clear.
CC Skylab Houston. Are you trying to call?
CC Skylab, Houston. We're over Guam, and I understand you're trying to call us.
PAO Skylab Control. We have loss of signal at Guam. We received information from the Guam tracking station that they were hearing voice on the spacecraft, and spacecraft was trying to reach us. They then attempted

SL-1I MC-118-2
Time: 00:44 CDT 01:16:44 GET
5/27/73

to patch a radio message through on another line and did not have any luck with that, so we did not hear from them. although Capcom here did try to call a couple of times. As I was saying, television video tape was dumped at Guam. We expect it in approximately 6 minutes. The actual amount of tape dumped is not certain at this time. That television video tape is going to be held at Guam until 6:50 Greenwich mean time or 1:50 a.m. central daylight time, at whichtime it will be relayed by communication satellite to Johnson Space Center, beginning at 7:21 Greenwich mean time, or 2:21 a.m. central daylight time. An additional 11 minutes of vidio tape onboard space station recorders will be telemetered to the Guam tracking station, and relayed immediately to Johnson Space Center. So that means we'll be getting 17 minutes, approximately, of television video tape of the parasol deployment done earlier in the day. That will all be coming to us beginning at 1:50 a.m. CDT. and finishing sometime after 2:30 a.m. central daylight time. Next opportunity for communication with the spacecraft will be probably only telemetry data is going to be at the Vanguard tracking station in a little less than 29 minutes. This is Skylab Control at 5 hours 55 minutes and 27 seconds Greenwich mean time.

END OF TAPE

SL-II MC-119/1
Time: 01:00 CDT 1:17:30 GET
5/26/73

PAO Skylab Control at 6 hours and 30 seconds Greenwich mean time. At this time, we've gotten indications from our communications officer that the television dump at Guam gave us only 3-1/2 minutes of video tape instead of the original 6 intended. And there is some question of how much of that final 11 minutes we may be able to get on the next Guam, next Guam dump which is at approximately 2:27 a.m. central daylight time. At this time, the indication we have is that they will make a definite attempt to get the final 4 minutes of that to get some idea of what the deployment looked like at the end. And we don't know if we will get more than 4 minutes of that second dump for that reason. So right now it looks like instead of a possible 17 minutes, we may have something more on the order of 7 or 8 minutes of videotape from the parasol deployment. This is Skylab Control. Our next acquisition of signal is not for about 30 minutes, I take that back, not for about 22 minutes. And we'll come up again then. This is Skylab Control signing off at 6 hours 1 minute and 33 seconds Greenwich mean time.

END OF TAPE

SL-II MC-120/1
Time: 01:22 CDT 1:17:22 GET
5/26/73

PAO Skylab Control at 6 hours 21 minutes and 56 seconds Greenwich mean time. At the present time, we are about 1 minute and 52 seconds from acquisition of signal at Vanguard. After the Vanguard acquisition, there will be another acquisition at Ascension. And following Ascension, there will be no acquisition until, oh I take that back there is at Ascension. Then there is an acquisition of signal also at Canary Islands immediately after that. So we have several passes following in a sequence here before we go out of tracking range. And during this pass, we expect to see some indication of maybe some temperature decline. Other than that we do not expect to hear from the crew. They should be well asleep by now. We may get some biomedical data that will indicate one way or another what status the crew might be. We have acquisition of signal there in about 1 minute. And we'll give you some indication of what's happening as soon as we see something on telemetry data.

END OF TAPE

SL-II MC-121/1
Time: 01:27 CDT 1:17:27 GET
5/27/73

PAO This is Skylab Control at 6:27:06. The biomedical officer has informed them that the science pilot is not wearing his biomedical equipment. And has asked that he be awakened to put on that biomedical equipment. We did not get data last night and it is mandatory that they get data tonight. And that is now being discussed with Kenneth Kleinknecht Skylab Program Manager at Johnson Space Center and Flight Director Donald Puddy. There may be a call made by a capcom after this discussion. We'll stay in line for the next few minutes. We have acquisition of signal at Vanguard.

PAO Skylab Control. We have 5 minutes and 30 seconds until loss of signal at Vanguard. And the discussion is still continuing about what things may be brought up with the crew if there is a discussion with the crew and if they are awakened. We don't know, of course at this time, if they are asleep or awake. But we have not heard from them since before the Guam pass, more than about an hour ago since the last time we have heard anything from them.

PAO This is Skylab Control again at 4 minutes before loss of signal. Flight Director Donald Puddy has requested his flight activity officer to give him an indication of whether or not he believes the crew is asleep. The flight activity officer says he does believe that is the case. And Flight Director Donald Puddy says that they will not be awakened, at this time, to put on the biomedical operational unit. And they will, for that reason, have no biomedical data tonight. It is believed that they are asleep after a very long day and they didn't feel that it would be worthwhile to wake them up at this point after they may have been asleep for as long as half an hour. And so for that reason, they will be receiving no biomedical data tonight and they will expected to wear that equipment later. This is Skylab Control and we will go off again. Let me give you a little information first about what we saw in the way of temperatures. Temperatures appear to be dropping on a regular steady rate now. Although 11 of those temperature sensors in the atmospheric area of the orbital workshop are still reading off-scale high, that is to say, they are reading 120 degrees, the maximum they can read. If they go above that level they don't give any readings, they just give a high reading. And there are, however, four on-scale readings in the orbital workshop area. And those have dropped from one half to 1-1/2 degrees during the last 30 minutes. And that's a very definite indication that the

SL-II MC-121/2
Time: 01:27 CDT 1:17:27 GET
5/27,73

temperatures are coming down in the orbital workshop area We still have no estimate of th overall temperature in that workshop. Since we - our thermal studies were based on a different situation than we have right now. But, that does indicate that the temperatures are coming down at possibly the rate of a couple of degrees an hour. And whether that will vary or not, we really don't have any knowledge at this time. This is Skylab Control at 6 hours 32 minutes and 35 seconds Greenwich mean time.

END OF TAPE

SL-II MC-122/1
Time: 01:47 a.m. CDT, 1:17:47 GET
5/27/73

PAO This is Skylab Control at 6 hours 47 minutes 40 seconds Greenwich mean time. We're about 2 minutes and 15 seconds now from a television release of about 3-1/2 minutes of film taken of the parasol deployment earlier yesterday. And you'll be able to see that on television monitors here and that will be available again later for an edited release sometime later this morning. You might be interested in knowing that at Ascension we got additional tracking data indicating that temperatures have dropped a little bit further. Some of those drops now are reading in the neighborhood of 2-1/2 degrees on sensors. We still have a number of scale - number of sensors reading off-scale high, as before, but temperatures now seem to be down from 1-1/2 to 2-1/2 degrees on most of those sensors that are available in the workshop. This is Skylab Control at 48 minutes and 28 seconds after the hour.

END OF TAPE

SL-II MC123/1
Time: 02:18 a.m. CDT, 1:18:18 GET
5/27/73

PAO Skylab Control at 7 hours 18 minutes 58 seconds Greenwich mean time. We've just had the horn sounding now in Mission Control for acquisition of signal at Guam. We're expecting Guam to provide us with television, probably in the amount of about 9 minutes. We have a maximum of possibly 11 minutes at Guam. And, we expect about 9 minutes of video tape time. This will be video tape again of the deployment. There is a satellite relay system set up to transmit this immediately to Johnson Space Center and we should be seeing, then, possibly the 9 minutes and this will include the final 9 minutes of television time. Those final 9 minutes should show the final deployed state of that parasol. The crew as it turns out has - the science pilot has put on his operational biomedical system. His biomedical telemetry data started coming down a little before 07:00 hours Greenwich mean time. And, that was a big relief to people here in Mission Control because they were again considering possibly waking the crew up. As it turns out, indications are that, at least the science pilot had not gone to sleep as of just before 07:00 Greenwich mean time or 2 a.m. central daylight time. And, immediately following that, they set on a plan that will allow them to sleep until 10 a.m. central daylight time tomorrow. If they have not awaken of their own accord by 10 a.m. central daylight time, or 15:00 Greenwich mean time, they will be awakened by a call from the ground. So, we're about 1 minute from acquisition of signal at Guam and we will be watching some TV live transmitted by satellite from the Guam tracking station as soon as it's within range and they can set up the telemetry instructions to get that off of the tape recorders aboard the spacecraft. This is Skylab Control. Stay tuned for television from Guam. Seven hours 20 minutes and 52 seconds Greenwich mean time.

PAO Skylab Control; we have data - telemetry data coming down now and that indicates the temperatures have continued to drop. During the last 1/2 hour, they have dropped another degree on several of the sensors. We still have a good many of them reading above 120 degrees on the off-scale high readings, but there are the four on-scale temperatures have all showed drops and those drops are generally in the neighborhood of 1 to 1-1/2 degrees. So, that means their temperature is coming down. We have temperatures now in the range of 112 to 117 on those on-scale temperatures transducers in the orbital workshop area. Temperature is still very cool back in the command module and MDA duct area. That's about 60 degrees right now. And, once that air gets circulating and temperature on the outside has been brought down over a long period of time, you will see those temperatures dropping.

SL-II MC123/2
Time: 02:18 a.m. CDT, 1:18:18 GET
5/27/73

We expect they may be down in 100-degree area by some time tomorrow. Skylab Control, and TV should be coming up any time now.

END OF TAPE

SL-II MC-124/1
Time: 03:06 a.m. CDT, 1:19:06 CET
5/27/73

PAO Skylab Control at 8 hours 6 minutes and 47 seconds Greenwich mean time. At the present time, the spacecraft is in range of the Vanguard tracking station; and, it's beginning an ascending node of the 183rd revolution, just beginning its 183rd revolution, traveling north to the northeast over South America. The dump of television at Guam station during two passes did not complete the total amount of video tape that have been recorded earlier by the crew. There's approximately 10 minutes, estimated, left on that video tape recorder and the plan now is to dump that video tape tomorrow morning at Goldstone during the first opportunity, which is at 14:35:34 Greenwich mean time, that's 9:35:34 a.m. central daylight time - during the Goldstone pass. If that is not completed, it will be - the remainder of the video tape will be dumped at the next opportunity following that. Both coolant loops are now operating. Both the primary coolant loop and the secondary coolant loop are functioning as heat exchangers in the orbital workshop attempt to cool the 100-ton spaceship. Exterior skin temperatures are now to 118 degrees and this should be reflected in temperature drops in the next several hours. By crew wakeup at 10:00 a.m. central daylight time, temperatures should be at about 100 degrees in the workshop, with internal metal surfaces somewhat cooler. The four temperature measures that are on scale in the atmospheric chart of the orbital workshop have dropped from 1/2 to 1 degree in the past half hour. An additional duct sensor previously reading off-scale high has now come on-scale as the metal structure of the workshop cools beneath the thermal parasol deployed yesterday. More film, as I indicated earlier, of that parasol deployment, will be available tomorrow morning after 9:35 a.m. central daylight time, during the Goldstone pass. We've had no additional problems. Indications from the biomedical equipment that's worn by the science pilot, Joseph Kerwin, indicates that he is now sleeping or apparently asleep. His heart rate and breathing indicates that he is, at least, in very deep rest period and probably sound asleep. And we will probably have no additional reports. Until the next hour, this is Skylab Control at 9 minutes after the hour.

END OF TAPE

SL-II MC125/1
Time: 04:11 a.m. CDT, 1:20:11 CET
5/27/73

PAO Skylab Control at 9 hours 11 minutes and 25 seconds Greenwich mean time. At the present time, we're receiving tracking data from Honeysuckle tracking station. Telemetered data coming down, giving us temperature readings again. These temperature readings indicate that we're about one degree lower than we were an hour and 15 minutes ago. And, those temperatures have continued to come down. We have a range of temperatures right now around 109 to 113 in the temperature transducers that are reading on scale around the sleeping compartment and the experimental compartment ceiling and the wardroom. So, that indicates that those temperatures have started coming down as we expected they would do earlier. There have been no new problems. We did have a slight power problem with some of our screens here, but that was only very brief and has not affected any of the telemetry or monitoring here in the Mission Control. Don't appear to have anything coming up of extreme importance. As you know, wake up time is scheduled for 10 a.m. central daylight time, provided that the crew does not wake up earlier than that. They are believed to have gone to sleep about 2 a.m. This is Skylab Control at 9 hours 12 minutes and 37 seconds Greenwich mean time.

END OF TAPE

SL-II MC-126/1
Time: 05:00 a.m. CDT, 1:21:00 GET
5/27/73

PAO Skylab Control at 10 hours and 5 seconds Greenwich mean time. At the present time, the temperatures in the orbital workshop continue to cooldown steadily. Our last tracking is at Bermuda station. We're just about to loose signal there. Temperatures continue to cool. This is a tribute to the successful deployment of the thermal parasol yesterday. Over the past 4 hours, temperatures have dropped about 5 to 8 degrees on several sensors in the orbital workshop area. While some indicators still show no legitimate readings below their off-scale high reading; that's an H that's signaled here on mission control displays, indicating that they are 100 de - 100 to 120 degrees depending on the individual sensor. Several on-scale readings are in the 109 to 112 degree range. And these temperatures around 110 are expected to come down to near 100 degrees by the 10:00 a.m. central daylight time wakeup call to be given to the crew, provided the crew has not awaken by that time. At this time, the pressure in the cabin is staying a steady 5 pounds per square inch. And, of that, 80 percent is the reading in oxygen. That's 80 percent oxygen, 20 percent nytrogen on the cabin at this time. The coolant loops are both in operation, attempting to take out as much heat as possible, using the heat exchangers. This is essentially an air conditioning unit and both coolant loops - normally one coolant loop is used by itself. We've - now had both of them operating simultaneously to try and lower that temperature as much as possible. The main effect, however, is coming from the deployed solar shield. That thermal shield on the solar - scientific airlock is working very effectively to bring down the metal temperatures. And those metal temperatures are slowly but surely being converted into temperatures in the air inside. Still - still rather warm in there, but they expect that it is going to be warm and very dry when they go in in the morning. But much more comfortable that it was today. Temperatures back in the command module and multiple docking adapter areas are quite a bit cooler in the multiple docking area duct. There is a temperature of 58.8 degrees, which is considerably cooler and there are circulating systems and fans blowing that air around to try and equalize the temperatures as much as possible. We are expecting to see some more television of that solar - that deployment of the solar shield that they put up, the parasol. And that will be coming in after 9:00 a.m. central daylight time during the Goldstone pass on revolution 186. That Goldstone pass is still quite a little ways from us, several hours off. But we should be seeing some good television of the final deployment of that solar shield at that time. This is Skylab Control at 3 minutes and 2 seconds after the hour.

END OF TAPE

SL-II MC-127/1
Time: 06:25 a.m. CDT, 147:11:25 GMT
5/27/73

PAO Skylab Control, Houston at 11 hours 25 minutes Greenwich mean time. We presently show the Skylab orbital assembly on its 184th revolution and now approaching acquisition by MILA. And the current orbit, 239.2 nautical miles by 235 nautical miles. The crew aboard Skylab, still in their rest period, still sleeping. Our day 3 Flight Plan shows a time of wakeup at 15:00 hours Greenwich mean time, or 9:00 o'clock central daylight time, when under acquisition through Canary. We're at 11 hours 26 minutes Greenwich mean time, this is Skylab Control, Houston.

END OF TIME

SL-II MC-128/1
Time: 06:26: a.m. CDT, 147:11:26 GMT
5/27/73

PAO Skylab Control, Houston. A correction to our last announcement. The Greenwich mean time is 15:00 hours, however, that should read 10:00 a.m. central daylight time.

END OF TAPE

SL-II MC129/1
Time: 7:00 a.m. CDT, 147:12:00:00 GMT
5/27/73

PAO Skylab Control, Houston; at 12 hours Greenwich mean time. We now show the orbital workshop off of the west coast of India. The crew is still sleeping; due to continue in their rest period until 15:00 hours Greenwich mean time. Meanwhile, we do plan a repeat dump from last night's television, which came in at approximately 1:50 a.m., and this the scene from the command module looking at the orbital workshop and the parasol deployment. This should be available on the television monitors in the news center. And that would be at 7:59 central daylight time this morning. I repeat, 7:59 central daylight time this morning. Skylab Control at 12:00 hours Greenwich mean time.

END OF TAPE

SL-II MC130/1
Time: 07:21 CDT, 147:12:21 GMT
5/27/73

PAO Skylab Control, Houston; at 12 hours 21 minutes Greenwich mean times. Monitoring data here appears that one of the crewmembers might be awake. We'll stand by for a possible call from CAP COM, Henry Hartsfield. Skylab presently passing over Carnarvon.

PAO Skylab Control, Houston; at 12 hours 23 minutes Greenwich mean time. Still standing by for a possible callup. Indications on the part of the surgeon's data gives us a possibility that the science pilot is awake, Joe Kerwin. But we'll stand by and see if the call is made by CAP COM, Henry Hartsfield.

CC Skylab, Houston. Good morning.

SC Morning, Houston.

CC We see your code in the DAS there. We also see you've got an attitude problem, and we're working on that.

SC Oh, what's the attitude problem?

CC We - we think we're out a little bit in Z. Right after you found the Sun for us last night the - It appeared that we were having a few problems in the Z. We can't get our drift nailed down. We've taken out about 30 degrees with a - two maneuvers and a couple of dumps and we think we need to go another 30 degrees in Zplus. And we'll have a procedure for you here at - at Honeysuckle. We're about oh, 30 seconds from LOS now. We'll be coming up on Honeysuckle at 29.

SC Okay, what time would we have gotten up this morning, if it was a normal wakeup?

CC Okay, we had you scheduled for about 15:00 Zulu.

SC I meant - We should have gotten up at 11:00, right? In normal flight plan?

CC Roger. That's the nominal time, Pete, but we were going to let you sleep late since you didn't get to bed so late - until late last night.

SC Okay, well, we're slowly trying to work our way back to the normal schedule. That's what I was trying to figure out. Say, what's your cooling look like? We just zapped down in the OWS. We were trying to figure out how well it was doing. It appears to be working very well in some spots, but not so well in the others. What's - what's your temperature profile show over the night?

CC Stand by 1.

PAO We've had loss of signal with Carnarvon. Next station to acquire will be Honeysuckle in about 3 minutes.

PAO Procedures report that Honeysuckle acquisition could be some what ragged because of the very low elevation angle.

SL-1I MC130/2
Time: 07:21 CDT, 147:12:21 GMT
5/27/73

CC Skylab, Houston. Looks like we been dropping about a degree an hour. We've got a lot of our temperature measurements back on scale now. We're showing some duct temperatures around 95, 98 degrees, which is in the workshop, which is down from what it was.

SC Okay. How does skin temp look? Got any idea how much percentage coverage you got with the sail now?

CC Okay, the guys are looking at that. We'll try to have a better picture for you a little later.

SC Okay, we're feeling walls around here. There's no doubt about it, the temperature's come way down in a lot of places. Of course, there's a lot of heat inside here but seems pretty good on the - oh, down around the bedroom and everything. But, over on the right hand side of the SAL where the sail looked a little squeezed, the wall temperature's still a little high. I don't know, we may have some local hot spots up there. But by a margin seems to be coming down quite a bit.

CC Roger, and we're about 30 seconds from LOS now, Pete. Texas will be coming up at 59.

SC Okay, we're going to grab a quick breakfast to get with it. We would like to try and get to bed tonight no later than an hour late. I - we're trying to get back on your time line. I know everybody wants us back on it. We're doing the best we can.

CC Okay, and we're planning on having you do a maneuver for us, if you will, over the states.

SC Okay.

PAO Skylab Cont - -

SC - get us a star tracker update, if you can.

CC Okay. Looks like we do have another minute or so on this contact here.

SC If you get us a (garble) star tracker pad, it would be awful nice if we could acquire one.

CC Our problem on the star tracker is, we're not really sure where you are in Z. So, we're having a little trouble computing those angles for you.

SC Yeah, I know. And, that's our problem out the window, also. If you guys could think about giving us a visual gouge, for instance, what our apparent yaw angle thought to be at various parts of the orbit sunrise, noon, and so on, that it might give us a hack on Z.

CC Roger, we think you need about a plus 30-degree maneuver, but we'll have that worked out for you stateside.

SC Okay.

SL-II MC130/3
Time: 07:21 a.m. CDT, 147:12:21 GMT
5/27/73

PAO Skylab Control, Houston; at 12 hours 32 minutes Greenwich mean time. We've had loss of signal at this time with Honeysuckle. As we heard, the crew aboard Skylab awakening early, punching up on their DAS a display a number which identified to the ground that they were awake and prepared to talk, if we had something to say. As you heard from Henry Hartsfield, we have seen some - some drifting of the spacecraft in the - the yaw axis. The crew sounding alert and ready to go. Awakening somewhat earlier than - than the flight plan had called for. At 12 hours 33 minutes Greenwich mean time, this is Skylab Control, Houston.

END OF TAPE

SL-II MC-131/1
Time: 07:41 CDT, 147:12:41 GMT
5/27/73

PAO Skylab Control, Houston; at 12 hours 42 minutes Greenwich mean time. The television dump from MILA coming in early, now being received on the television monitors. This is Skylab Control, Houston.

END OF TAPE

SL-II MC-132/1
Time: 7:58 a.m. CDT, 147:12:58 GMT
5/27/73

PAO Skylab Control, Houston; less than 1 minute now from acquisition by Texas. On the 185th revolution for the Saturn workshop, we now show Skylab with an orbit of 239.2 nautical miles by 235 nautical miles. We'll stand by and monitor this stateside pass.

CC Skylab, Houston; stateside for 17 minutes.

CDR Hi there, Houston. What can we do you for?

CC Okay. Would you like to work on this maneuver?

CDR Yes, Henry. You are - We'll copy it down. I'll tell you - You know it starts us out behind the power curve, because unfortunately all this food should have been in the wardroom by now, and we just - We've been down here for 15 minmutes just trying to sort out breakfast, and we haven't even started on it. And it really puts behind the power curve. Until we get that wardroom going, every meal hour is just ah - it's juggle 87,000 cans down here in the command module. And ah - ah - Do you want to give us something to copy down, or would you like somebody to go start the maneuver?

CC I guess we'd like to get somebody, if it's convenient, Pete, get someone right away on this maneuver, so we can try to get our attitude sorted out.

CDR Okay. We're going to send Joe up there while we make his breakfast.

CC Okay. That sounds like a good plan.

CC Pete while you're putting your breakfast together there, we'd like to throw out something for you to be thinking about. We're tentatively looking at the possibility of a Press Conference this afternoon shortly after 21:00.

CDR We're, we're what - what - You mean 21:00. Wat's that local time?

CC Roger. That's ah - ah - a little after 4:00, local.

CDR Okay. Look, on a noninterference basis, fine. We're doing the best we can to get back on a normal schedule. And I sure hate to stop working, especially if we're behind. And the way I look at it right now, we're still just a tad behind, mainly because of this meal prep and everything. We're a little behind on our stowage transfers. We've kept up pretty well with - with activation. If you all want us to have a press conference, fine. But, let's make it short, okay?

CC Roger. We concur with that whole heartedly, Pete.

SPT Houston.

CC You down at the ATM, Joe?

SPT Yeah.

CC Okay. I'd like to give you the maneuver information first, if you've got something to jot it down on.
SPT Come ahead.
CC Okay. The first thing we'd like to get off is a nominal H cage. That's 52023. Then we want the MODE switch to ATT HOLD CMG. Then we're going to do a 30-degree plus-Z maneuver. And that's 52020, 50000, 50000, 50036, then a strapdown initialization, which is 52012, 50005. And after that, MODE switch to SOLAR INERTIAL. And you do not want to start the procedure until the dump is complete.
SPT Okay. I understand all that, and I'll only read back the maneuver, which is a 52020, 5000, 5000, 50036. And it's been suggested up here, that if we could activate H-alpha in our monitor and get a description of the Sun, we might come as close to the right roll angle that way as any other.
CC I guess we - we think your roll is not in too bad a shape. The yaw is the problem.
SPT Okay. Spacecraft yaw solar roll, which is directly related to Z.
CC Okay. We copy.
CDR Okay, Hank. For another - for another data point, we're going to press right into day 4. I think the workshop is quite workable right now. It's probably 95 or 100 down there. It's very dry. And we'll use the same technique we did yesterday. When anybody gets too hot, we'll quit, come up, and cool off.
CC Roger. Copy. Sounds like a good plan.
CDR Also, by the way, Hank. I made a handy-dandy hand temperature wall survey just a little while ago. And the ah - I - I believe the crinkle's out on one side of the sail, but I think on the other side of the sail, if I were facing the solar airlock, the crinkle is on the right side over towards about where M509 is mounted. That's still pretty hot on the wall. But, everything else seems pretty good below that, and above that, and all the way around on the other side of the vehicle, 90 degrees around from the airlock.
CC Roger. Copy.
CDR I don't know what your skip gap data shows, but that's what my hand-held data shows.
PLT Hey, Henry.
CC Go ahead.
PLT Let me give you an update on the PLT's food yesterday, all right.
CC Okay.
PLT I'll give you a list of items I did not (garble)
CC Stand by 1.

SL-II MC-132/3
Time: 7:58 a.m. CDT, 147:12:58 GMT
5/27/73

PLT There'll be one thing I'm not going to eat. I've got bread coming out of my ears, and I don't like bread. Butterscotch pudding, apricots, and coffee with sugar. The last three were snacks that I just didn't even know that I had until I turned in last night and then it was too late.

CC Paul, we had a drop out in signal here, could you repeate everything prior to the butterscotch pudding?

END OF TAPE

SL-II MC-133/1
Time: 08:07 CDT, 147:13:07 GMT
5/27/73

SC Okay, ambrosia, macaroni, and bread. And, there's a lot of bread that I'm not going to -
CC Say again, your comment about the bread.
SC It wasn't worth it. Forget it.
SC Okay, Hank. I have one update.
CC Okay.
SC I didn't eat my snack last night either. I couldn't find it. We - I ate everything else except the asparagus which was already reported, Ed. We'll try and do better for you but we're using the menus out of the checklist, now and finding the - finding the food. But yesterday we were a little behind the power curve. But, until we get this food down in the pantry and can get organized in the wardrome, it's like three guys eating at the rush hour at Times Square, inside this command module.
CC Roger, copy.
CC Skylab, Houston. For information, we - we got our tapes back last night and we had a carrier but we didn't have any of the SEVA comments. So, I don't know whether you remember them or not but perhaps some time today we could - if you got a free moment you can answer those questions again on a tape for us.
SC Yeah, you didn't miss naything Hank. They didn't do it because I forgot about it until I got into bed. Now we can either do them real time if you got a good long pass or I can put them on tape.
CC Okay, it's your choice, Paul.
SC All right. I'll try to get around to it this morning.
CC Okay. - -
SC - - get the television back on the deployment?
CC Well, we looked at the TV pictures we got here, and they're still studying those things. It did look like it didn't quite go all the way out; but, well, we'll take - we'll give you the results of what we come up with.
SC Okay.
SC How was the biomed last night, Henry?
SC Roger, look good down here, Joe.
CC And, Joe, when you get through with the maneuver - when it's complete and then you'll do your strapdown disposition - the rest of that. We've got a star tracker pad for you that goes on the acquisition cue card for reduced power.
SC Okay, wait until I get the maneuver going. And incidently, you guys never recommended maneuver time? Or shall I guess?
CC Roger. Go with what you have now.

SL-II MC-133/2
Time: 08:07 CDT, 147:13:07 GMT
5/27/73

SC Well, what's that for information, Henry? I - -
CC Six minutes.
SC I'd like to know what's in there.
CC Roger. Six minutes is in there now, Joe.
SC Okay.
CC SPT, Houston. When you get a - break there at the console, I got th e switches I want you to hit.
SC Okay, read them up.
CC Okay, we - on panel 207, now that we got the ATM coolant loop up, we'd like to get you to ENABLE on the caution and warning. The pump DELTA-P coolant temp and heater temp unter ATM canister.
SC Roger.
SC And, I'm ready to copy the star tracker pad.
CC Roger. The star is Canopus and it will be available day, 28:00; night, 03:00. Inner gimbal minus 0660; out of gimbal plus 1620; and up at the top there I missed, that should be 5,000 and in the box goes 1. Remarks do not enable R-plane error update until you get a go from the ground. In other words, do not do 52011, 50011 until advised.
SC Okay, understand that and I'm - think I'll also do this without computer control of the star tracker, to let it go into wide search.
CC Okay, that's good.
CC Skylab, Houston. We're about 30 seconds from LOS. We'll be coming up on Madrid at 20 and we plan to dump the recorder there.
SC Roger.
SC Say, Hank. Tomorrow why don't you plan on giving us revelie.
CC Roger, will do.
PAO Skylab Control, Houston; at 13 hours 16 minutes Greenwich mean time. We've had loss of signal with Bermuda. Madrid to acquire in approximately 4 minutes. The crew awakening early this morning sounds cheerful and ready. We heard from all three crewmembers during that pass, Conrad, Weitz, Kerwin. Meanwhile, Joe Kerwin, getting data from the ground, making inputs into the attitude and pointing control system aboard the orbital workshop. To know the vehicles drift in yaw, the APCS is commanded manually by the astronauts at the control and display console of the Apollo telescope mount. While Kerwin is doing this, Conrad and Weitz are preparing breakfast aboard the command module.

SL-II MC-133/3
Time: 08:07 CDT, 147:13:07 GMT
5/27/73

We're at 13 hours 17 minutes Greenwich mean time. Continuing to monitor, this is Apollo Control, Houston.

END OF TAPE

SL-II MC-134/1
Time: 8:18 a.m. CDT, 147:13:18 GMT
5/27/73

CC Skylab, Houston through Madrid for 7 minutes.
CDR Hi there.
SPT Okay, Houston. I just now went back to SI. The maneuver's complete, and I'll get the star now if I can.
CC Okay.
CC Joe, we're looking at data now. We can't tell you whether you're there or not, but it looks better than anything we've seen all night.
SPT Okay.
CDR Give us another day, Hank baby, and we'll have this baby perking along just like it's supposed to be.
CC That's what we like to hear.
CDR I'm feeling pretty spunky. Got a good night's sleep, just had a little sausage, a little scrambled eggs, and I'm working on my jam and bread, with a little coffee goes pretty well this morning.
CC That's sound good to me. I haven't had my breakfast yet.
CDR Sorry about that.
PAO Skylab Contrcl, Houston; at 13 hours 24 minutes Greenwich mean time. A little more than 3 minutes remaining on this Madrid pass. The crew aboard Skylab, all three crewmembers awake. At least Conrad and Weitz, at this time, having breakfast, expected to be rejoined shortly by Scientist Pilot, Joe Kerwin, who has been working at the display and control console of the apollo telescope mount. Standing by, continuing to monitor any conversations between the crew and CAP COM, Henry Hartsfield, this is Skylab Control, Houston.
CC Skylab, Houston. We're about 30 or 40 seconds from LOS. Next contact is Honeysuckle at 07.
SC Okay, Houston. I'm searching for the star now. The tracker hasn't found it yet. We'll talk about it at Honeysuckle.
CC Okay.
PAO Skylab Control, Houston; at 13 hours 28 minutes Greenwich mean time. We've just had loss of signal through Madrid. The next station to acquire will be Honeysuckle, some 39 minutes from this time.

END OF TAPE

SL-II MC-135/1
Time: 9:06 a.m. CDT, 147:14:06 GMT
5/27/73

PAO Skylab Control, Houston; at 14 hours 6 minutes Greenwich mean time. We're less than 1 minute away now from acquisition with Skylab through Honeysuckle. This should be a very short time of acquisition somewhere in the order of 1 minute and 30 seconds. And we'll stand by and monitor conversation with the crew aboard Skylab as conversations develop. Our CAP COM in mission control, Henry Hartsfield.

CC Skylab, Houston through Honeysuckle for a minute and a half.

SPT Houston, SPT. I've acquired a star and the gimbal angles are 0 minus 0618, and the hour is plus 559, and the ah - I'd like to go to - to update orbital plane here.

CC Roger. Stand by.

CC Joe, we'd like to look at this data for a little while, and it'll probably be stateside before we give you a GO there.

SPT Okay.

CC Skylab, Houston. We're about 30 seconds from LOS. Goldstone will be coming up at 36.

SC Roger.

PAO Skylab Control, Houston; 14 hours 9 minutes Greenwich mean time. We've had loss of signal now with - -

SC (Garble).

SPT By activating the OWS TCS. Once I get it powered up, do you want the (garble). You want the OWS - You want the OWS HEAT EXCHANGER switches left on, or do you want me to switch them to OWS?

CC Roger. Switch them to OWS, per checklist.

SPT Checklist is (garble).

PAO Skylab Control, Houston. We had a stretch out in that acquisition time, apparently, over Honeysuckle. Next station to acquire will be Goldstone at approximately 25 minutes. When we looked at Skylab from the control center, Joe Kerwin was at the Apollo telescope mount star tTracker. This is designed to provide the star position inputs to the digital computer of the ATM for calculating the roll reference angle and orbital plane error. We'll stand by to pick up Skylab after acquisition at Goldstone.

END OF TAPE

and perhaps that'll replace the press conference or something. You all get - can get enough out of that and we keep working.

CC Roger.

SC We just put a couple of tripple flippers on there for you and everything so you ought to have some good stuff.

CC Okay, good show.

SC And the CDR's at wardroom activation.

CC Okay, Pete. Could you give us a quick run down if it's convenient, on where you are time line now?

SC I'm at wardroom activation. The PLT just finished hooking up the water tank 7. We're just moving into the waste management compartment. Right now, I'm starting day 2 bake out initiate.

CC Roger, copy.

SC Okay, and the SPT is doing the waste management compartment activation page 2-8. And, Hank, I'd like to know how the star acquisition data look to you. And also whether you guys are looking around for a - not for us to put the cover - the pyro cover back on the probe. What we like to do is, as soon as we get a free hour or so, is to attemp to engage the probe in the drogue in a more or less normal way, so that we'll have confidence we can do it when we de-activate.

CC Okay, I'll let you know what's going on down here. Rusty is working up a procedure with some of the fellows on troubleshooting that probe. And we hope to get that up to you sometime today.

SC Okay, tell them to remember the Kilo - India, Sierra - Sierra mode.

CC Roger.

END OF TAPE

SL-II MC-137/1
Time: 09:43 a.m. CDT, 147:14:43 GMT
5/27/73

CC Joe, in answer to your question about the momentum. We think we're in good shape, however, we're not absolutely sure. We want to watch it a while. We have not enabled star tracker updates. We're going to hold that a while. You can expect those sat finds for a while, until we get squared away. We'd like to look at it for, perhaps another rev, here.

SPT Okay. It just occurred to me, you were going to lose the Star before too long, due to occultation.

CC Roger. We should acquire next time. Another little bit of information for you, Joe, in regard to the ATM experiments. We've reconfigured, you know, in going through our ground checkout - the ATM - the canister thermally, and ATM experiments has been configured according to pages Alfa 1 and Alfa 2 of your ATM Experiment Checklist and Data Book. Except that S082-B main power has not been commanded on. And processor rework in the checklist, we've boxed ourselves in, such that we can't command it on from the ground. So, next time you go by there, we're requesting that you configure the XUV split main power on.

SPT 82-B main power on, okay.

CC And, for your info also, we have the S055 pressure gage powered on and we're going tc command it off at about ah - Well, it should be already commanded off.

SPT How does the pressure look?

CC Pressure looked good, Joe.

PAO Skylab Control, Houston; now 1 hour 47 minutes Greenwich mean time. The crew made a real-time decision to turn on the television. This has been fed into Goldstone and Texas. It's not being received in the mission control center. That was Pete Conrad who made that call. The television, apparently placed into the dome pointing down over the orbital workshop area where all three crewmembers presently appear to be working. Conrad reported that he was doing the wardrobe activation portion of his checklist. We'll stand by and continue to monitor conversations as they develop.

PAO Skylab Control, Houston; 14 hours 49 minutes Greenwich mean time. A followon to Conrad's conversation with Henry Hartsfield, we do expect the television to be on and active on each stateside pass during the day.

CC CDR, Houston. Is it convenient for you to answer a couple of question about the undervolt we had, yesterday?

CDR Say again, Hank.

CC Roger. If you've got a minute, you might answer a couple of questions about the undervolt we had yesterday in the CSM.

CDR Yes, sir. Go ahead.
CC Okay. It looked very much like, after we looked at the data, that the currents that we saw, the loads were very much like the radiator heaters and we were wondering if you could recall the position of the ECS radiator heater switches, primary and secondary on panel 2, at the time the problem occurred?
CDR Yes, sir. We checked those and they were both off.
CC Okay. And just to rule out anything else, we'd like to confirm that there were no switches or circuit breakers being reconfigured at about the time the problem occurred, other than normal checklist items?
CDR No, sir. The best, as I can remember, we put it pretty well in the quiescent configuration. And ah - we di - we were - I forget what we were doing, we weren't doing any configuration and all of a sudden bam bo, we got that may day undervolt, and - I'll tell you, whatever - If if wasn't short, what ever it was, it burned itself out without blowing a breaker, because after a while, when we were turning heaters off, and everything, it was just went away.
CC Roger. Copy. Thank you.
CDR Hope it wasn't the ignition switch to the SPS.
CC Okay. Our data down here, Pete, showed that the condition for the undervolt, in other words, the high currents lasted approximately 5 minutes.
CDR That's correct.
SC Skylab, Houston. We're about 30 seconds from LOS. We'll be acquiring you at Madrid at 58. And we plan to dump the data recorder, there.
SC Okay. And we'll turn the TV off.
PAO Skylab Control, Houston at 14 hours 53 minutes Greenwich mean time. We've just had loss of signal. Next station to acquire, Madrid, in approximately 4 minutes.

END OF TAPE

SL-II MC-138/1
Time: 09:56 a.m. CDT, 147:14:56 GMT
5/27/73

PAO Skylab Control, Houston; 14 hours 58 minutes Greenwich mean time. Under acquisition at this time through Madrid.

CC Coming through Madrid for 8-1/2 minutes.

SC Okay, Henry, I got a note for you. If you look on page 2-83 of the checklist.

CC Okay, go.

SC About two-thirds of the way down my column is a recent change to where it says water dump pressure indicator less than 0.2.

CC Roger.

SC We can't get that. Now when I dump - When we dumped the condensate tank into the waste tank last night, the lowest we got within a reasonable amount of time was 1.0, and I let it run almost 5 minutes here and got down to 0.75. So I'm pressing on. You might post the water guys and see what they think of that.

CC Okay. Copy.

SC Houston, SPT.

CC Go ahead.

SPT Okay. When I was measuring the iodine in water tank 1, it ran very close to zero. I would estimate from the gage between a half and one part per million. But as you know, it's very difficult to read when it's that low. I gave it 40 units which is the amount required to bring it to the - to add four parts per million to a whole tank. And remind us to sample it again at some later time after it's had a chance to mix. I don't know whether the heat may have affected the iodine or the reagent or - or both. Over.

CC Roger. Copy.

PAO Skylab Control, Houston; 15 hours Greenwich mean time. We've been listening to Paul Weitz - -

CC We're going to clear the ACS alert from the ground that you got there so we can see a CMG cage if it occurs again. No action required on your part.

SC Okay.

PAO Paul Weitz presently in the water system activation. Skylab now continuing on its pass over Madrid. Some 5 minutes remaining on this pass.

PAO Skylab Control, Houston, at 15 hours 7 minutes Greenwich mean time. We're out of acquisition range now with Madrid. The next station to acquire will be Honeysuckle in approximately 35 minutes. This is Skylab Control, Houston.

END OF TAPE

SL-II MC139/1
Time: 10:42 a.m. CDT, 147:15:42 GMT
5/27/73

PAO Skylab Control, Houston; at 15 hours 42 minutes Greenwich mean time. Less than 1 minute away now from acquisition with Skylab through Honeysuckle. We now show an orbit of 239.8 nautical miles by 234.8 nautical miles. Skylab traveling at a velocity of 25094 feet per second. We'll stand by now and wait for the callup from CAP COM, Henry Hartsfield, in the Mission Control Center.

CC Skylab, Houston through Honeysuckle for 6 minutes.

SC Roger, Houston.

CC CDR, are you in the command module now?

SC No, sir. I'm down in the wardroom.

CC Okay. - -

SC What you need?

CC Well, we got a couple of things we'd like to get done up there, if it's convenient for you to take a break.

SC Yeah, I'm on my way. I'll be there in a flash.

SC Houston, SPT.

CC Go ahead.

SC Roger. In activating the fecal driers, the checklist says to close the circuit breakers. Now, it was my impression we weren't going to use the heaters. Am I right or wrong?

CC That's correct, Joe.

SC I should leave the circuit breakers open. Right?

CC That's okay, Joe. Just leave them open.

SC Okay.

SC The CDR is in the command module, and I just turned on the SO-82B main power.

CC Roger. Thank you, sir.

CC Okay, we've been have a little command problem with - in the command module, so over on panel 3, the command reset switch, we'd like for you to verify that it is in normal. And after that we'd like for you to, if it is, take it to off for 3 seconds and then back to normal.

SC Okay, it was in normal. I put it off for 3 seconds. It's back in normal.

CC Roger. Thank you, sir. And the next item is that we think we've got a pretty good handle on what the momentum is doing. We're - what we're trying to watch, Pete, is to see if the computer is aware of the out ofplane and is taking it out. It looks like it is but we're not sure it's working absolutely correctly yet. In order to verify

SL-II MC139/2
Time: 10:42 a.m. CDT, 147:15:42 GMT
5/27/73

we would like for you to bring up the optics and see if you can find us a couple of stars. And give us the ID and shaft and trunnion off the (garble), just use the telescope. And the time to the nearest minute. And that way we could make sure that the computer's doing the right thing.

SC Okay. I'll see what I can do.

CC And you got 13 minutes of night left, Pete.

CC Skylab, Houston, for the SPT.

SC I'm getting your stars right now, Hank.

SC Hey, Hank, CDR.

CC Go ahead.

SC But sometime today, we'll tag up on B channel or whatever we're suppose to be recording on for the medics. One of the things that we're going to have to straighten out is how much water we drank yesterday. And seeing that we were all drinking out of the same gun and everything, we've - I think we've mentioned some numbers on that but I'd like to refine them. If we didn't send you numbers, would you let us know so that we go ahead and tag up on that? I'm gonna try and bring all that stuff up to date tonight in the Evening Report some time.

CC Okay. Copy. And we're about LOS now. Hawaii is coming up at 04.

SC Okay. See you then.

PAO Skylab Control, Houston; at 15 hours 15 minutes Greenwich mean time. We've had loss of signal over Honeysuckle. The next station to acquire will be Hawaii in approximately 14 minutes.

END OF TAPE

SL-II MC139/1
Time: 10:42 a.m. CDT, 147:15:42 GMT
5/27/73

PAO Skylab Control, Houston; at 15 hours 42 minutes Greenwich mean time. Less than 1 minute away now from acquisition with Skylab through Honeysuckle. We now show an orbit of 239.8 nautical miles by 234.8 nautical miles. Skylab traveling at a velocity of 25094 feet per second. We'll stand by now and wait for the callup from CAP COM, Henry Hartsfield, in the Mission Control Center.

CC Skylab, Houston through Honeysuckle for 6 minutes.

SC Roger, Houston.

CC CDR, are you in the command module now?

SC No, sir. I'm down in the wardroom.

CC Okay. - -

SC What you need?

CC Well, we got a couple of things we'd like to get done up there, if it's convenient for you to take a break.

SC Yeah, I'm on my way. I'll be there in a flash.

SC Houston, SPT.

CC Go ahead.

SC Roger. In activating the fecal driers, the checklist says to close the circuit breakers. Now, it was my impression we weren't going to use the heaters. Am I right or wrong?

CC That's correct, Joe.

SC I should leave the circuit breakers open. Right?

CC That's okay, Joe. Just leave them open.

SC Okay.

SC The CDR is in the command module, and I just turned on the SO-82B main power.

CC Roger. Thank you, sir.

CC Okay, we've been have a little command problem with - in the command module, so over on panel 3, the command reset switch, we'd like for you to verify that it is in normal. And after that we'd like for you to, if it is, take it to off for 3 seconds and then back to normal.

SC Okay, it was in normal. I put it off for 3 seconds. It's back in normal.

CC Roger. Thank you, sir. And the next item is that we think we've got a pretty good handle on what the momentum is doing. We're - what we're trying to watch, Pete, is to see if the computer is aware of the out ofplane and is taking it out. It looks like it is but we're not sure it's working absolutely correctly yet. In order to verify

SL-II MC-140/1
Time: 11:01 a.m. CDT, 147:16:01 GMT
5/27/73

PAO Skylab Control, Houston; at 16 hours 2 minutes Greenwich mean time. About 2-1/2 minutes away now from acquisition over Hawaii. There is a possibility that the - during the next stateside pass the television from the orbital workshop will be transmitted live. In any case, following that stateside pass, we would expect a taped playback of the earlier television transmission. We're about 2 minutes away now from Hawaii. We'll stand by and continue to monitor.

SPT - - 5.2, trunnion 31.9, the time 15:54. Nunki shaft 76.8, trunnion 20.1, the time 15:56 and Peacock, I wasn't too sure of this one because it was getting daytime. Shaft 302.9, trunnion 26.8, time 15:58.

CC Good work, Joe. Thank you a lot.

CC And Joe, while we got you there, we would like ah - Have you activated the film vault yet?

SPT Negative.

CC Okay. We'd like to get some temperatures there if we could, so we can get evaluation of the condition of the film. We'd like for you to use a digital thermometer, which is presently located in W749 Bravo and Alfa. Those two drawers - The probes are in one drawer and the (garble) in the other. And ah - like you to take some measurements in film drawers Delta and Juliet, and on the walls if you have time.

SPT Okay. Delta, Juliet.

CC And ah - we would like for you also to record the times that you take these measurements. There's also a pad, either there or on the way, concerning taking some temperature measurements around the food lockers and we also need times that you read the thermomenter on that.

SPT Roger.

CDR Hey, Houston. The biggest thing I can notice is the grid floor is beginning to cool compared to yesterday. Some of those other bigger lockers are bigger heat sources, but everything generally seems cooler in there, although still reading 100 degrees off - scale high on the OWS test gage.

CC Roger. Copy. And ah - This agreed with our telemetey. We stowed - All the things we had off-scale are starting to come on-scale now and we're showing some of the grid work getting down to around 105, or so.

PLT Henry, as Pete mentioned this morning, it's hot over by water tank 1 on that side of the scientific airlock. And, just for information, there's a lot of the metal to metal fittings don't fit too well at 130 degrees, like they did at 70. Had a pretty tough time getting the wardroom hose on water tank 1, which is still hotter than a 2-dollar pistol, but some of the snaps has been hard to work.

CC Roger. Copy.
CDR Yep. I presume that those water tanks are going to be about the longest thing in the spacecraft to cool down, right?
CC Roger. We probably think so, but that may at least keep us from cycling the heaters on for a while.
CDR Yeah. And the plus Z SAL is almost cold.
CC Roger. Our telemeters show this colder than the minus Z.
CDR Well, at least you know it works right around that area.
CC Roger.
SC You may also be interested to know, Hank, that, I don't think any of us have found a problem in mobility or stability at any task we've had to do yet.
CC Hey, that's beautiful.
CC We never did get a report yesterday. Did you see anything wrong with that dome hatch? This is kind of going back a pace, you know. We had a vent leak there or something. Did you notice anything abnormal with it?
SC No, nothing other than, - I looked it over fairly carefully. It looked completely normal. All forces on opening it appeared to be normal. The only thing was there was some debris on the inside of the screen. But it did appear to all be on the screens, not on the valve.
CC Roger. Copy. Was the workshop fairly clean, or was there a lot of things floating around in there when you opened her up?
SC We got a fairly good collection, but I think for a vehicle, a total combined vehicle of this volume, I think it's pretty darn clean.
SC Tell them about your - -
SC Yes. My biggest prize so far, is about a 6-inch long drill bit. It's about 3/16, I guess, found that. There's a fair amount of stuff in that ah - oh what's that one valve, that panel 403, that 403 valve in the dome of the airlock had about an inch and a half of stuff in the bottom of the debris collector in it.
CC Roger. Copy.
SC Still there, Henry?
CC That's affirmative.
SC CDR has completed testing all the fire sensors and the bad one we mentioned yesterday, we put back on the line just to see what would happen.
SC And presently in the process of bringing the SOP/SOMAs to bring you up to date on him. The PLT is about halfway down page 91.
CC Roger. Copy.

SL-II MC-140/3
Time: 11:01 a.m. CDT, 147:16:01 GMT
5/27/73

CC Did the fire sensor appear to be normal now?
SC Well, it hasn't gone off, yet, we'll let you know.
CC PLT, Houston. If you do come around and want to change the sensor out, how about trying to changing the sensitivity on it before you do that, see if that'll do the trick. And also, as a reminder, it looks like we're going to have live TV stateside, and Goldstone will be coming up at 15.
CC If you want to adjust the sensitivity, the SWS Systems Checklist, page 2-32, has the procedure.
SC Okay. We'll try that first.
CC Okay. And we're about 30 seconds from LOS; Goldstone at 15.
SC All right.
PAO Skylab Control, Houston; at 16 hours 12 minutes Greenwich mean time. We show acquisition with Goldstone at approximately 3 minutes. Still no definite confirmation at this point from network as to our status on the line for live television. We'll stand by, however.
PAO Two minutes away, now, from acquisition with Goldstone. Still no definite confirmation as to whether or not we will receive live television. During the Goldstone pass, however, Goldstone is configured to do so. And will in the absence of live television, if that turns out to be the case, record the pass. We're at 16 hours 13 minutes Greenwich mean time. This is Skylab Control, Houston.

END OF TAPE

SL-II MC141/1
Time: 11:13 a.m. CDT, 147:16:13 GMT
5/27/73

PAO The network advises that we do have a television line. We're some 28 seconds away now from predicted time of acquisition.

CC Skylab, Houston through Goldstone for 7 minutes and we've got a picture. Goldstone for 7 minutes and we've got a picture.

CC We've got a good view of all the food lockers now, looking straight down to th: trash airlock.

SC Okay; here comes the CDR just coming through the dome hatch now on his way. I hope he doesn't crash.

SC You'll notice he blew that one, although we must admit that he hasn't been practicing with his in one hand.

CC Roger.

SC Wow.

SC If you can't be good be careful.

SC We ain't had much problem adapting.

CC Roger.

CC Beautiful.

SC Hey, I'll tell you, there is no problem adapting. And you can go anywhere you want. You may get out of control a little bit enroute, but you don't bang into anything hard. And if you just take your time pushing off you can go anywhere you want in the vehicle. Just super fast.

CC You make it look easy, Pete.

CC Skylab, Houston. We'd like to get a question answered in regard to the condensate system. We show the dewpoint still climbing up. And we want to make sure that you did get that system activated.

SC Hank, we showed it went down over the night. Let me go back up there and take a quick peek. We showed it went from 56 dewpoint down to 53. Let me go look.

CC Okay. We just want to make sure that you have the two valves from the heat exchangers opened up to the condensate tank. We show that it is around 54 now.

SC 54 is what we received.

SC Okay, it is 54. It was 48 this morning, Paul tells me. And you want us to verify that we got both heat exchanger A's open?

CC That's affirmative. Now we noticed it was down this morning, too, and we started going up erasing doubts in our mine as whether the system was operating properly or not.

SC Well, it looks like it's taking water out, Hank. It was - DELTA-V on the condensate tank was about 3 this morning. It's 2.8 now, indicating that it is filling.

SL-II MC141/2
Time: 11:13 a.m. CDT, 147:16:13 GMT
5/27/73

CC Roger. Thank you.
SC Now say again which valves you wanted me to check.
CC Okay, on panel 230, the heat exchanger A, the water valve going to the condensate tank. And it's the same on panel 232.
CC Skylab, Houston. We're about 30 seconds from LOS. We'll be picking you up over Bermuda at 26.
SC Okay, Hank. All those valves are in the proper position. May be that just we're up and about. Do you suppose that's it?
CC That's probably it.
SC Well, keep an eye on it for us. Your measurement obviously tagged up with ours, and we noticed it this morning. It was 48, but you're right; it's back up.
SC We may be putting out a little bit working down there in the workshop, but it's still probably 105 or so. All three of us have been down there all morning.
CC Roger. Copy.
SC But it's not unpleasant.

END OF TAPE

SL-II MC142/1
Time: 11:24 CDT, 147:16:25 GMT
5/27/73

CC Skylab, Houston through Bermuda for 7 minutes.

PAO This is Skylab Control, Houston. We're standing by for a feed of the first pass through Goldstone. That's a television feed of the first pass through Goldstone. We're standing by for that transmission.

CC - - It should adjust new Z on the next time around with the dump and we should have a normal momentum dump rev after next.

SC Okay, can we inhibit star tracker outer gimbal update?

CC That is inhibited now, Joe.

SC I mean ENABLE, but I said the other.

CC Negative. We'd like to leave it inhibited for the time being.

SC Okay.

CC We'd like to let it get in plane and get all squared away before we ENABLE, Joe.

SPT Roger.

PAO Skylab Control, Houston; at 16 hours 29 minutes Greenwich mean time. We're still carrying the audio live over our pass of Bermuda. The playback that you see on the television monitors is from the previous pass or the first time the television was t ed on by commander Pete Conrad over Goldstone. There is no dio accompanying this television tape.

SC We got it on in the dome plate down in the OWS because everybody is working down there.

CC Roger. Copy. We'll record.

PAO Skylab Control, Houston. We have picked up audio from our first Goldstone pass and, we'll play that with the picture that you are now seeing.

SC This OWS heat exchanger fans - we'd like to verify that you did complete steps 3 and 4 on page 2-62.

SC You caught me in transient, Henry. What do you want.

CC Okay, we lost contact while we were talking about the VCS duct installation. We'd like to verify that you've completed steps 3 and 4 on page 2-62.

SC It's affirmative but that was done last night when we installed the duct. And I just got to the TCS activation this morning. So, it - both those steps are complete.

CC Okay. Well, last night we had the fans in the on position and today we wanted to configure them to run through the workshop. We'd also like to get bed 2 bakeout initiated if you haven't already started that.

SC Oh, I meant to do that and forgot. I'll go up and do it right now. You can consider it started in 5 minutes.

SL-II MC142/2
Time: 11:24 CDT, 147:16:25 GMT
5/27/73

CC Okay.

END OF TAPE

SC - Room activation.
CC Okay, Pete. Could you give us a quick rundown, if it's convenient on where you are in the time line now?
SC Roger. I am at wardroom activation.
SC And the PLT just finished hooking up the water tank 7 and we are just moving into the waste management compartment. Right now I am starting bed 2 bakeout initiation.
CC Roger. Copy.
SC Okay, the SPT is doing the waste management compartment activation, page 2-81. And, Hank, I like to know how the star acquisition data look to you. And also whether you guys are looking around for a nut for us to put the cover back - the pyro cover back on the probe. What we'd like to do as soon as we get a free hour or so is to attempt to engage the probe in the drogue in a more or less normal way. So that we'll have confidence we can do it when we deactivate.
CC Okay, To let let you know what's going on down here. Rusty is working up a procedure for some of the fellows on troubleshooting that probe. And, we hope to get that up to you some time today.
SC Okay. Tell them to remember the Kilo-India, Sierra-Sierra mode.
CC Roger.
CC Joe, want to ask you a question about the momentum. We think we are in good shape. However we're not absolutely sure. We want to watch it awhile. We have not enabled a star tracker update. We're going to hold that awhile. You can expect those SAS fairings for a while until we get squared away. We'd like to look at it for perhaps another rev here.
SC Okay. It just occured to me that you're going to lose the star before too long due to occultation.
CC Roger. We should acquire next time. And another little bit of information - -
CC Skylab, for the PLT.
SC Yeah.
CC We'd like to know which purge you were working on then, and whether there was a water heater or chiller, and how long the purge had been going.
SC You mean when the water dump pressure was slow coming down? What are you talking about?
CC Roger. Are you doing a purge now? Or, were you doing a purge?
SC Yeah. I'm in the process of doing a dump through the wardroom dumps for the checklist right now and and activating the trash box.

SL-II MC-143/2
Time: 11:34 a.m. CDT, 147:16:34 GMT
5/27/73

CC Roger. We'd like to terminate that immediately Paul.
SC Okay.
SC Why, Hank? What's it doing?
CC Okay. Apparently you didn't read me before. We see the waste tank pressure coming up, and it's getting above the triple point of water. If we continue we're taking a chance of freezing up the probe. The overboard - -
SC - can't understand and you're right, we didn't read you before. We heard a couple of very broken transmissions went back to you and you never answered. I guess we hit a bad spot again.
CC Roger. We're taking a chance that the screens might freeze up. I would still like to know which purge you were on when we stopped you there. Was it the chiller or the water heater?
SC Well, I'll have to go back and hunt up. No, it was the water heater, because I'd already unpluged the dump line from the chiller.
CC Okay. Can you give us an estimate of how long that purge had been going?
SC Well, I tell you, I fouled up some place along the line, bad. The dump values have been open for about half an hour, I think.
CC Roger. Copy.
SC Because, I swear I got it checked off my checklist and I swore I did it after we - do you purge the line from water tanks 7 or whatever the heck it was going on there. And I came back to it to open it for the heater dump and it was still open.
CC Roger. That explains, then, the rise in pressure down there.
SC Yeah.
PAO Skylab Control, Houston; 16 hours 42 minutes Greenwich mean time. Standing by for a further television transmission on that first pass.
CC Skylab, Houston. We're about 1 minute from LOS. We have a very low pass at Ascension at 46. If we're unable to contact you there we'll be seeing you at Honeysuckle at 20. And if you can do it real quickly here, we'd like to get an update on where you are on the checklist.
SC SPT is finishing up activation.
CC Copy.
SC CDR is finishing up the SOP/SOMAs.
CC Roger.
CC Skylab, Houston through Ascension for two minutes.

SL-II MC-143/3
Time: 11:34 a.m. CDT, 147:16:34 GMT
5/27/73

SC Roger, Houston.
CC Skylab, Houston. 30 seconds LOS. Honeysuckle at 20.
SC Okay.
PAO Skylab Control, Houston; now receiving the followon picture of that first pass over the States with Skylab on television.

END OF TAPE

SL-II MC144/1
Time: 11:48 CDT, 147:16:48 GMT
5/27/73

PAO Skylab Control, Houston; at 17 hours Greenwich mean time. During our television playback transmissions where we carried the audio, we took our air-ground down for a period of time during the Canary and Ascension pass. And we will play that back for you now.

CC Skylab, Houston. We're about 1 minute from LOS. We'll be coming up on Canaries at 35, and we plan to dump the recorder there.

SC Roger.

CC Skylab, Houston through Canaries for 9 minutes.

SC Roger, Hank. We're going to be moving around quite a bit now. We may not acknowledge you.

CC Okay. No problem.

CC Skylab, Houston for the PLT. We're seeing the pressure in the waste tank coming up, and it's getting up the cripple point of water. We'd like to terminate the water purge so we don't wind up freezing up those probes down there.

SC Did you call, Hank?

CC Roger. We're monitoring the pressure in the waste tank coming up, Paul, and it's going up above the cripple point of water. We'd like to terminate the water purge, if you're doing that now, so that we don't take a chance of freezing the probes up.

PAO Skylab Control, Houston; 17 hours 1 minute Greenwich mean time. We're now coming up via television with our last piece of tape from the first stateside pass.

END OF TAPE

SL-II MC145/1
Time: 12:01 p.m. CDT, 147:17:01 GMT
5/27/73

CC We're talking about the VCS duct installation. We'd like to verify that you've completed steps 3 and 4 on page 2-62.

SC That's affirmative. But that was done last night when we installed the duct. And I just got to the TCS activation this morning. So, both those steps are complete.

CC The bed 2 bakeout initiated, if you haven't already started that.

SC Oh, I meant to do that.

CC We'll leave that television rigged in the dome and as we work today we'll leave it in a few other places. And, perhaps that'll replace the press conference or something. You ought to get enough out of that and we can keep working.

CC Roger.

SC We've just put a couple of triple flippers on here for you, Henry. So, you ought to have some good stuff.

CC Okay. Good show.

SC Okay. The CDR is at wardroom activation.

CC Okay, Pete. Could you give us a quick run down, if it is convenient on where you are on the time line, now?

CDR Rog. I'm at wardroom activation.

SC And, the PLT just finished hooking up the water tank 7 and we're just moving into the waste management - -

CC Roger. Copy.

SC Okay. The SPT is still in the waste management compartment on page 2-81. And, Hank, I'd like to know how the star acquisition looks to you and also whether you guys are looking around for a nut for us to put the cover of that thing-pyro cover back on the probe. What we'd like to do if we get a free hour or so, is to attempt to engage the probe in the drogue in a more or less normal way, so that we'll have confidence we we can do it when we deactivate.

CC Okay. To let you know what's going on down here. Rusty's working up a procedure for some of the fellows on troubleshooting that probe. And we hope to get that up to you some time today.

SC Okay. Tell them to remember the Kilo-India, Sierra-Sierra mode.

CC Roger.

PAO Skylab Control, Houston; the television we're now looking at is a playback of the first televised stateside pass by the crew aboard Skylab.

SL-II MC-145/2
Time: 12:01 noon CDT, 147:17:01 GMT
5/27/73

CC Joe, I want to ask you a question about the momentum. We - we think we're in good shape. However, we're not absolutely sure. We want to watch it a while. We have not been enable the star track update. We're going to hold that awhile. You can expect those SAS fairings for a while until we get squared away. We'd like to look at it for, perhaps another rev.

SC Okay. It occurred to me you were going to lose the star before (garble) because of occultation.

CC Roger. We should acquire next time. And, another little bit of information, before you go, in reguard to the ATM experiment. We've reconfigured, you know in going through our ground checkout of the ATM. The canister (garble) and the ATM experiment configured Alfa 1 and Alfa 2 of your ATM Experiment Checklist and Data Book. Except that S082-B main power has not been commanded on. And in the process of rework in the checklist, we've boxed ourselves in such that we can't command it on from the ground. So next time you go by there, we're requesting that you configure the XUV slit main power on.

SC 82-B main power on, okay.

CC And for your info, also, we have the S055 pressure gage powered on, and we're going to command it off at about - well, it should all ready be command off.

SC How does the pressure look?

CC Pressure looked good, Joe.

PAO Skylab Control, Houston; at 17 hours 13 minutes Greenwich mean time. We're approximately 7 minutes away now from acquisition through Honeysuckle. What you have been seeing and hearing over the past number of minutes has been the television playback of the first television transmission of the stateside pass, showing the crew working in the orbital workshop. We will pick up again live over Carnarvon, when we acquire and that's some 6 minutes and 30 minutes - 6 minutes and 30 seconds from this time.

END OF TAPE

SL-11 MC-146/1
Time: 12:18 p.m. CDT, 147:17:18 GMT
5/27/73

PAO Skylab Control, Houston; 17 hours 19 minutes Greenwich mean time. Coming up now on Honeysuckle, standing by for the callup from CAP COM, Henry Hartsfield.

CC Skylab, Houston through Honeysuckle for 8 minutes.

SC Say, Houston. I've got a question for you.

CC Go ahead.

SC What kind of light configuration do you want in the OWS. It's sort of - I'm not sure I understand all of it on B-9.

CC Stand by one.

SC While you're working on that, Henry, how's the waste tank pressure look?

CC Okay. Let's us check that and while we've got you, Paul, I'd like to find out exactly which valve it was that you left on.

SC The dump valve and the water in the ward-room table pedestal.

CC Okay. And, we'd also like to know how far along along with the wardroom water heater dump had you gone, when we caught it - or when we stopped you?

SC It was essentially done, I guess, - I guess, 10 to 12 minutes into it.

CC Okay.

PAO Skylab Control, Houston. Pete Conrad, working with the lighting configuration now on his checklist.

CC PLT, Houston. You have a GO to continue with the dump. We show the waste pressure down to 0.05. You can monitor if you'd like, I think, on panel 800; 0.09 is the max we want.

SC Okay, Houston. We've got another question for you.

CC Go ahead.

SC After we complete that, how soon can we use the trash airlock?

CC Anytime you want to, Pete.

SC Okay. Because we've got some stuff piling up here and we start - like to clean out.

CC CDR, Houston. In answer to your question concerning the light; and the idea there is to turn on all the lights and then use the individual lights on - individual switches on each light to either turn it on - high, low, or off.

SC What you're saying is, you want us to find out what the minimum light configuration we can get away with. And set them by turning on all of the lighting switches on 616 and go around and check the other lights, right?

SL-II MC-146/2
Time: 12:18 p.m. CDT, 147:17:18 GMT
5/27/73

CC That is affirmative. You've got it.
SC Okay. We're happy with what we've got right now. How about taking a look at how much that is and see if we're drawing too much for you.
CC Okay. Will do.
SC And Hank, that brings me to condenstate holding tank relocation, which is, in fact, complete. So, I will now step ahead to 15-10 condenstate holding tank evacuation.
CC Roger. Copy.
SC So, that looks like I'm running about 2 hours a 20 minutes behind. However, things go so nice and comfortably up here, we'll probably press on today, like we did yesterday.
CC Roger. Copy.
SC You all might think about that. We got good night's sleep last night. We're rested. As long as we don't get tired we'd like to flog through today and it may be that we don't get screwed back around in the right sleep cycle until we get to orbital operation. We've got that time in K here to regroup. We can knock that out because we're sort of regrouping as we go. And what I'm shooting for is to wind up, begin in orbital lock when we're supposed to be getting them, as long as we don't run ourselves into the ground and I don't think we're running ourselves into the ground. We're getting good night's sleep and everything. So, how does that sit with you?
CC Sounds pretty good, Pete. But, we'll think about and we'll get back with you.
SC Okay. We may start getting ahead here, eventually.
CC Skylab, Houston. We need to get somebody to the ATM console and get this star tracker power off.
SC The SPT is on his way.
CC Okay. The reason for that is, it's wanderin about, and we need to stop it.
SC Okay.
CC And Skylab, Houston. When you get to doing the quiescent panel Delta that we uplinked to you, we'd like to leave the EPS spec on.
SC EP spec on. Okay. I haven't gotten that piece of paper yet, maybe Joe has it.
CC Okay. That's general message 0313.
CC Skylab, Houston. We're about 30 seconds from LOS. We'll be picking up Hawaii at 41.
PAO Skylab Control, Houston; at 17 hours 29 minutes Greenwich mean time. We've had loss of signal

SL-II MC-146/3
Time: 12:18 p.m. CDT, 147:17:18 GMT
5/27/73

through Honeysuckle. The next station to acquire Skylab is Hawaii, this in approximately 11-1/2 minutes.

END OF TAPE

SL-II MC-147/1
Time: 12:38 a.m. CDT, 147:17:38 GMT
5/27/73

CC Skylab Control, Houston; at 17 hours 39 minutes Greenwich mean time. Less than 2 minutes away now from acquisition with the Skylab orbital assembly over Hawaii. Skylab presently in an orbit of 239.8 nautical miles by 234 2 nautical miles. Meanwhile back crewman analyses of ambient cabin temperatures in the orbital workshop show present readings of slightly over 100 degrees. Probably between 100 and 105 degrees. Projections on these numbers should give us an ambient temperature down to about 100 degrees by the end of today's work day. And it is expected that the temperature will continue to drop, reading between 80 and 90 degrees by the end of tomorrow's workday. We're less than 1 minute away now from acquisition with the crew aboard Skylab. We'll stand by and monitor this Hawaiian pass.

CC Skylab, Houston through Hawaii for 8-1/2 minutes.

SC Roger, Houston. Be advised, we just did your general message 312 CBRM 15 troubleshooting and it did not work. So, we have the rev off and the charger off. Okay?

CC Roger. Copy, and we would like to - if you havn't already done so put the message 311 B into work. The temperatures in the food logger?

SC Okay. Did that come all the way through? I saw that on the teleprintar and it wasn't all the way out of the teleprinter, and I wasn't sure whether you got the whole message in or not before I pulled it out. Is it all transmitted?

CC Roger. It should be, Pete.

CC We got - got that message up lighty just before LOS. We only got 3 shoves on it. So you might have to slew it out a little.

SC Okay.

PAO Skylab Control, Houston; 17 hours 45 minutes ground elapsed - Greenwich mean time. Some 4 minutes 40 seconds remaining in this pass over Hawaii. Very little conversation between - the crew and the Mission Control Center. We do expect another live television pass coming up over the states. Goldstone acquisition is some 7 minutes away from this time.

CC CDR, Houston.

SC Yes, sir.

CC Got a little clarification on that message 313 if you - is convenient to jot it down.

SC Okay. It came up split.

CC Say again.

SL-II MC147/2
Time: 12:38 a.m. CDT, 147:17:38 GMT
5/27/73

SC It was a split message. One line was out of phase with the other in the middle. It was a little hard to read.

CC You think it's all there, or do we need to send it again?

SC Why don't you just send it again. Everything that's in one of those things and we get in them we get further behind. If not really important - Do you want me to dump that switch configuration right now? Or can I wait for a while?

CC We wanted you to do it at lunch.

SC Why don't you send me the message again because that one's kind of garbled.

CC Okay, that's the best thing. We'll try it again, Pete.

SC It looked like all you wanted was just 3-12 and leave the computer powered up. Was that right? In standby.

CC That's roger. Wanted to leave those two circuit breakers closed and leave the EP spec on.

SC Okay, I can remember that. You don't have to send a message. And I'll do page S3-12 and leave those out.

CC That's affirmative and just a reminder bat B charge is due to terminated at 20:00.

SC Okay, 2 hours and 10 minutes from now, huh?

CC Roger.

CC We're about 30 seconds from LOS. Be picking you up at Goldstone at 52.

SC Okay.

PAO Skylab Control, Houston; 17 hours and 15 minutes Greenwich mean time We're out of acquistion now with Hawaii. The next station to acquire, Goldstone, in some 2 minutes 10 seconds from this time on this stateside pass. We donot expect to receive television live through Goldstone or Texas. However, we do expect to receive television live through MILA.

END OF TAPE

SL-II MC-148/1
Time: 12:51 p.m. CDT, 147:17:51 GMT
5/27/73

CC Skylab, Houston, through Goldstone, 6 minutes.

CC Skylab, Houston through Goldstone, 5 minutes now.

SC Okay.

PAO Skylab Control, Houston.; 17 hours 55 minutes Greenwich mean time. We presently have acquisition with Skylab through Goldstone. A couple of calls have been made to the crew by CAP COM, Henry Hartsfield. Not yet receiving a response. However, we are looking at live telemetry data in the Mission Control Center. We'll stand by, continuing to monitor. This is Skylab Control, Houston.

CC Skylab, Houston. We're about 1 minute from LOS. We'll be picking you up at Bermuda at 02. And before we sign off here, I'd like to get an update on the SPT and PLT.

SC Okay, Houston. At this point the emphasis in the SPT's activities is on the second letter and in the PLT on the first letter (garble).

CC Roger. We copy that and we've got live TV scheduled for MILA (daughter).

SC Well, you should have let us know. We would have tried to hold back. The SPT is on the midst of film vault activation, and the PLT as you may have guessed, hasn't quite made it through urine system activation yet.

CC Roger. Understand.

END OF TAPE

SL-II MC149/1
Time: 13:00 p.m. CDT, 147:18:00 GMT
5/27/73

CC Skylab, Houston through Bermuda for 10 minutes and we'll be dumping the data recorder here.

SC Okay. We're taking our lunch break now, Hank.

CC Roger.

CC And we're set up to get about 3 minutes of TV through MILA, which should start at about 04.

PAO Skylab Control, Houston, 18 hours 4 minutes Greenwich mean time. Standing by now for a possible television transmission.

CC Hey, we're getting the picture now. Looks good. Hey, we're getting the picture now. Looks good.

CC We're getting a great picture down here, guys. You make it look easy.

SC Chizam.

SC Hey, Hank. Whos's the temperatures looking? Are they still coming down on the outside of the vehicle?

CC That's affirmative, Pete. And we just lost our TV through MILA. It was a pretty short pass. That was a good show. Looks like the bird's cooling down real good.

SC If we've got time this afternoon, we'll set the TV up at some other location down below or something where we're working, and catch that any time you want.

CC Okay.

CC Skylab, Houston. We're about 1 minute from LOS. We'll be coming up on a real low pass at Carnarvon at 16. If we don't get you there, , we'll get you at Ascension at 19.

SC Roger - doger.

PAO Skylab Control, Houston; at 18 hours 13 minutes Greenwich mean time. We've had loss of signal with Bermuda. The next station to acquire is Canary. In - in approximately 2 minutes 40 seconds. There will be a very low elevation on this pass. Very likely that we do not have any conversations with the crew aboard Skylab. However,the next station to acquire is Ascension some 5 minutes and 40 seconds from this time. We'll stand by and keep the line up and continue to monitor. This is Skylab Control, Houston.

END OF TAPE

SL-MC150/1
Time: 13:14 CDT, 147:18:14 GMT
5/27/73

CC Skylab, Houston, through Ascension for 10-1/2 minutes.
SC Roger.
SC Hey Hank, CDR.
CC Go ahead.
SC How nervous are you about getting that food temp thing? You want us to put somebody on that right after lunch?
CC Roger, Pete. We'd like to get that - we'd like to get a hack at the cool down on that food to see if we can get an estimate of how hot it was., or at least how fast it's cooling off.
SC Okay. Well, we'll put the SPT on it after lunch.
CC Okay.
SC Okay. So he's in a hold on activating the film vault right at the moment.
SC Hank, one other thing, I think we're sort of bogging down here again a little bit. I think what we want to accomplish today is to get the complete water system activated. Waste management system and as much of that sort of stuff as we can to get it livable down there. This eating in the command module and everything really slows us down.
CC We concur with that, Pete.
CC And Skylab, Houston. So you can be thinking about it, right now we're scheduling the EVA status report for 01:50, and the medical conference for 02:20.
SC All right.

END OF TAPE

SL-II MC-151/1
Time: 13:14 CDT 147:18:14 GMT
5/27/73

CC Skylab Control, Houston; 18 hours 24 minutes Greenwich mean time. Approximately 6 minutes remaining during this pass over Ascension.

CC Skylab, Houston. One minute untill LOS. Canarvon at 52.

CDR Acquired.

CC Skylab Control, Houston; 18 hours 30 minutes Greenwich mean time. We've - Skylab has passed out of acquisition range with Ascension. The next station to acquire, Carnarvon at some 22 minutes from this time, meanwhile we wanted to reaffirm the decision not to hold a news conference with the Skylab crew today. I repeat, a news conference will not be held with the Skylab crew today,; however, television may - may be expected to continue during the stateside passes today. At 18 hours 31 minutes Greenwich mean time, this is Skylab Control, Houston.

END OF TAPE

SL-II MC152/1
Time: 13:50 CDT, 147:18:50 GMT
5/27/73

PAO Skylab Control, Houston, at 18 hours 50 minutes Greenwich mean time. We're less than 2 minutes away now from reacquiring teh Skylab orbital assembly on the 189th revolution. This pass over Carnarvon. We presently show an orbit of 239.8 nautical miles by 234.2 nautical miles for Skylab, and our best hack as to where the Skylab crew was in the activation process when the Control Center last had contact over Ascension placed commander Pete Conrad right on schedule ready to start his lunch break. The crew was having lunch when we last had contact with them. Scientist Pilot, Joe Kerwin, had been involved with the film vault activation. And Pilot, Paul Weitz performing the urine collector activation. Placing both of them about 2 hours behind the scheduled time line. We're less than a minute away now from acquisition. We'll stand by and continue to monitor.

CC Tape recorder, this is the PLT answering the questions that were sent up yesterday on the teleprinter regarding the SEVA. Question 1, on trying to cut the strap, no, I did not cut the strap because I felt we did not have the right tools on board to do it with. The strap went down very tight against the beam fairing. Next question, can you get to the strap under the beams - under the SAS or beam fairing? Let me explain further to you what it is or what it appears to be. There is a section of meteoroid shield which is directly under the beam fairing and this is then bolted through the - what we saw in Huntsville as kind of a standard method on the meteoroid shield. Shield sheet being attached to angle and the angle is then bolted together. And this is one of those joint lines that ran longitudinally the length of the meteoroid shield, parallel to and just outboard of the beam fairing. So it doesn't go under the sas or under the beam fairing. The next question is could I get the two-pronged tool under the strap? Yes, sir, I could. As a matter of fact, we almost left it there because that goes with the next question. I did push in on the beam, got the two-pronged tool between the beams and the strap and then had one devil of a time trying to get it back out. Question 5 is yes, sir, the strap is definitely dug into the beam fairing. What it looks like to me is, it is really wrapped tight right up against it and if there are any protruding bolt heads or bolt threads, they are right down into that beam fairing. It's almost like it was put on there. I really - I almost find it hard to believe it's on there so tight. Number 6 is the specific origin of the strap. We just talked about it, I think. Any more questions, gve me a call. Number 7, on observing deflection. I did not observe any; however, the commander, watching out his window, said that the end of the beam fairing, when I first pulled on it using the

shepherd hook - He estimates deflected about a foot. Now I pulled it toward me. It deflected. I also moved the whole workshop, surprisingly, at which point TACS squirted at us. And I started to move back. And, as a matter of fact, the workshop was pulling at the command module for a short while there. Anyway, any deflection which was put on has gone back out, and there is no permanent deformation. Question number 8; there is no sheet metal attached to this angle strap outboard of the beam fairing. Of course there is underneath. The entire section of meteoroid shield which day under the beam fairing at launch is still there. And question 9, the last one on whether it was a single or double angle. As best as I remember it, it was where there were double angles back to back. The outer half of it and it was double for the first half of where it wrapped around at the beam fairing at which point the - one of the two angles tore away from the other and it's only single from there on out. That's the end of the summary.

CC Hey, Paul. We caught the whole thing. You just started recording over Carnarvon and that was a pretty good summary.

SC Well, you rascal. I was on tape also. Were the points clear enough, Hank?

CC Roger. It's very clear. In fact, Rusty had just come in and he caught it all, too.

SC Okay.

SC Hey, Hank; CDR.

CC Go ahead.

SC If you and Rusty remember the long crowbar, It was laying down there that somebody sent in that of course we do not have with us. A man that had a crowbar like that could go EVA either out of the command module or down that beam fairing, stick that crowbar under that thing so that he could drive with his feet against the SAS beam and pry it right off of there. But it wrapped around so hard that it's obviously, in effect, those bolts have punctured the SAS skin and, in effect, it's riveted that thing on there. And Paul got that claw under it, but he couldn't provide enough leverage. The claw is so short and the pole was so whippy that he couldn't provide enough leverage to pry it off of there. It was extremely frustrating because the man with the crowbar could have to drive right up there and crowbared that thing right off of it and I'm sure that panel would have flung out.

CC Roger. Copy. Do you think that you could have gotten the cutter around that strap down at the base, or did you try to get around the strap?

SC No. I don't think that cutter would have done it.

SC I don't either, Hank. I tell you the tool that I wish I'd have had would have been a circular power saw of some kind and just cut the strap away where it comes off the meteoroid shield.

CC Okay, what we - -

SC I'll tell you what's in the back - I'll tell you what's in the back of my mind right now. We have a pry bar in one of these tools, and I'm going to figure out a way to tether an EVA so when we go out and do our thing on day 26, it's worth our while to see if we can't "whinny" around there. Because, - you can hand over hand down the SAS beam. It's sticking out far enough and on one side where the butterfly hinge is, it's clean. So you wouldn't cut your gloves. And I think if you got down there with a pry bar you could pry it loose and then the SAS beam would give you a ride back because it's going to take off and go.

CC Roger, Pete. For your information, we're already working in the water tank trying to see what we can do along those lines. We've looked at the pictures and what we're trying to - we have determined that the tool we have on board will cut that strap. In fact it will cut a strap larger than that. Out on the west coast we're looking to see - on the picture we're trying to determine if there is a place that you can get at the strap with the cutting tool.

SC Well, I'm not really sure that you can. If you look at that picture, you'll find that that strap when it tore, it must have been traveling at high velocity. Maybe it's very soft aluminum because it has almost form-fitted itself right around the right angle of the SAS beam. You know, even though it's not perpendicular to the corner, it's laying diagonally across it, but it's awful flat.

CC Pete, this is Rusty. What's we're try -

SC Go.

CC Yeah. What we're talking about doing. Pete, is not trying to get the strap off the beam but cut it below the beam if you can get the cutter tool around it, that is, get it internal to the tools to the jaws of the cutter. We're looking at doing that from up at the fwst ring on the end of the pole. The question is do you think you can get - with the fully open jaws, can you get the angle inside the jaws?

SC Well, the answer to that is down low. I don't think so because what it is and you'll have to look at the drawings, but is there runn ng parallel to the hatch section just a little bit out forward of the SAS beam, was there a seam where meteoroid shield bolted together running longitudinally?

CC Yes, sir. And we've looked at all of those angles in there and all of them can be cut with the tool,

at least on the ground as far as the mechanical advantage is concerned.

SC Okay. Well, we're going to need a tank because I've sure been thinking about how to get around there and give her a go on day 26. Because I got - when he pulled on the end of the beam down at the bottom end - I - I couldn't see a strap, but that thing just didn't move, but the beam is free. It deflected a good foot. I can see the solar panels accordioning in and out as he was deflecting it. And he applied plenty of force. I almost hauled him right out of the action red. We had the TACS firing back at us so we loaded it up pretty good whenever you figure two (garble) with him jerking on it and the tacs firing the other way.

CC One last question quickly. We're 40 seconds from LOS here. If the strap is cut loose, do you believe that there is anything else holding the beam down?

SC Not from the outside, Rusty, but realize that whole (garble) hinge is deployed underneath the SAS on the other side. I can see it clearly and there is skin all under there, but I believe all the skin tore either clean where it runs underneath it or tore it off parallel to the SAS beam itself. It's just for that one angle (garble) hanging over it.

CC Roger. Three seconds to LOS.

SC And I want to tell you something else next pass, Rusty.

CC Okay we'll see you in Guam at 08.

PAO Skylab Control, Houston; at 19 hours 3 minutes Greenwich mean time. Wheard the discussion between the Mission Control Center CAP COM Henry Hartsfield as well as backup commander Rusty Schweickart talking to Pete Conrad and Paul Weitz aboard the Skylab critiquing the standup EVA and the attempt to deploy the solar panel, also discussing possible alternate solutions which will be studied here on the ground. We're 4 minutes away now from acquisition with Guam tracking, this is Skylab Control, Houston.

END OF TAPE

SL-II MC-153/1
Time: 14:03 CDT, 147:19:03 GMT
5/27/73

CC Skylab, Houston through Guam for 7 minutes.
SC It's kind of obvious, as Pete said, that angle is really wrapped up around that and even though it makes an angle of 30 or 40 degrees with the axis of the beam fairing, it is just part of the contour of the beam. It has, in fact, lifted the meteoroid shield up away from the vehicle. That section of the meteoroid shield is still attached top and bottom by the - by the deployment link arm. And that, in fact, when the meteo - when the SAS tried to deploy, where that piece goes up over top, it heaved that meteoroid shield on up and it buckled there.
CC Roger, Copy.
SC I didn't mean buckled, I meant that it's bowed quite distinctly by the - by the wing pulling on it. So, I'm convinced that there's still a load. I don't think it's quite far enough to permanently deform or put a dent in the meteoroid shield. I still think the strap is holding it together and the forces in the system right now (garble) separate the two.
CC Roger. Copy.
CC Paul, do you think yo ut enough force on that SAS wing to break the damper (g..le)
SC Yes, sir. I sure did. However, none of it got transmitted to the damper because, it all got taken up by the angle.
CC Roger.
SC Now, your real concern, I assume, is whether it's broken yet or not. And I have every confidence that it's not.
CC Roger. We copy. We were just wondering if you cut the strap. You know, if the damper was - -

END OF TAPE

SL-II MC154/1
Time: 14:09 p.m. CDT, 147:19:09 GET
5/27/73

SC Your real concerned, I assume, is whether it's broken yet or not. And I have every confidence that it is not.

CC Roger, we copy. We just wondered if you cut the strap you know, if the damper was frozen the thing still might not go very far.

SC No, no - no (garble) - Oh, I see. Right. No, I think it's still in there and anchored.

CC Skylab, Houston. I got a checklist comment for the CDR.

SC Go ahead.

CC Okay. On page 2-148, when you get down to the film dosimeter transfers. We want to delete the last item, which is the ETC5 film canister and bag. We shouldn't transfer that until the film vault is down to 90 degrees.

SC Okay.

SC Hey, Henry. If we got enough time left in this pass I'm about to do a trash airlock dump, if you want to watch it.

CC Roger. We got 2-1/2 minutes.

CC Skylab, Houston. We're about 30 seconds from LOS. Goldstone will be coming up at 31.

PAO Skylab Control, Houston; at 19 hours 15 minutes Greenwich mean time. We've just had loss of signal with Guam. The next station to acquire Skylab will be Goldstone in approximately 15 minutes.

END OF TAPE

SL-II MC154/1
Time: 14:09 p.m. CDT, 147:19:09 GET
5/27/73

SC Your real concerned, I assume, is whether it's broken yet or not. And I have every confidence that it is not.

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SC No, no - no (garble) - Oh, I see. Right. No, I think it's still in there and anchored.

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CC Okay. On page 2-148, when you get down to the film dosimeter transfers. We want to delete the last item, which is the ETC5 film canister and bag. We shouldn't transfer that until the film vault is down to 90 degrees.

SC Okay.

SC Hey, Henry. If we got enough time left in this pass I'm about to do a trash airlock dump, if you want to watch it.

CC Roger. We got 2-1/2 minutes.

CC Skylab, Houston. We're about 30 seconds from LOS. Goldstone will be coming up at 31.

PAO Skylab Control, Houston; at 19 hours 15 minutes Greenwich mean time. We've just had loss of signal with Guam. The next station to acquire Skylab will be Goldstone in approximately 15 minutes.

END OF TAPE

SL-1I MC-155/1
Time: 14:29 CDT, 14:19:29 GMT
5/27/73

PAO This is Skylab Control, 19:29 Greenwich mean time. Minute and a half out from Goldstone for a fairly solid stateside pass through - Very good coverage from Goldstone across through the southern edge of the Bermuda tracking station circle. Very frequently, the acquisitions have been running slightly earlier than the predicted time shown on the AOS clock. We'll stand by now as AOS clock shows about 15 seconds to lock on to the spacecraft. At 19:31, standing by, this is Skylab Control.

CC Skylab, Houston. Stateside for about 6 minutes.

CC I guess we'll probably have you about 19 minutes. There may be a short dropout between Goldstone and Texas.

CC Skylab, Houston. For whoever is available to go to the ATM.

SPT I'll go.

CC Okay. We would like to get the star tracker enabled and bring it up to the pad values we gave you this morning. And we'd like to enable - computer control the star tracker. That's data command 50004, but do not enable new Z.

CC And Skylab, Houston. We think bed 2 bakeout is probably complete too.

SC Okay. Just a minute.

SC Hey, Hank I think you've got a little mistake on page 3-12 in the systems book. Would you open it please?

CC Okay, stand by.

SPT Houston, SPT. What do you need?

CC Okay, you at the ATM?

SPT I am now.

CC Okay, what we want to do is bring the star tracker up to the pad angles we gave you this morning. And we wanted you to enable computer control to gimbal.

CC Star tracker control - -

SC (garble) please Hank, they were in another book. We didn't have the books out.

CC You want the pad values again?

SC Yeah. I remembered the star, give me the gimbal angle.

CC Okay, inter gamble minus 0660. Outer gimbal plus 1620. And we want you to INABLE star track control and that's 50004, data command.

SC I already did that. I did that this morning.

SC Hey, Hank. On the CSM system 1-12, the third step down there; what power off on panels

9 and 6 are you talking about?

CC — Stand by one, we'll get that.

CC — Okay. That's a audio tone power switch I think you're talking about there, Pete.

SC — Well, if I turn those off I lose all comm throughtout the workshop except in the command module.

CC — let us take a look at that. You're probably right.

SPEAKER — (garble) then disable channel Bravo for recording?

SC — Hi there Rusty, you're up Skylab loop.

CC — Okay, Pete. You're right there. Why don't you both standby on that and we'll take a look at it. I think we got somthing wrong on the checklist here.

SC — I think you do too. It got awful quiet in here.

SC — Okay, be advised that section 3-12 is complete with the - except I (garble) on. The G&N computer is still on. All else is done except hold on your panel 9 and 6 stuff.

CC — Roger. Copy. Good show.

CC — And you were right Pete. We're going to need power on all three of those panels.

SC — Okay.

CC — Skylab, Houston for the SPT.

SPT — Go ahead.

CC — Roger. Telemetry is showing that star track control is not enabled.

SPT — Okay, maybe you guys can inhibit it again. I'll check it.

CDR — How many watts is the command module drawing now Hank?

CC — Stand by.

CDR — Under this configuration.

CC — It looks like about 700 watts.

CDR — That's about 300 less than you figured wasn't it?

END OF TAPE

SL-II MC-156/1
Time: 1441 p.m. CDT - 14:19:41 GMT
5/27/73

CDR Houston, Skylab.
CC Go ahead.
CDR It's done now Hank, are you ready to - enable orbital plane error update?
CC Negative, we don't want to do that right now. We want to look at it one more rev.
CC And while you're up there Joseph, can you terminate the bed 2 bakeout?
PLT (garble) Okay. (garble)
CC Joe, for your information the star tracker locked on just like we thought it would and the computer has dropped the vehicle back in plane, and we should get a good momentum dump this night time.
PLT Hope so.
CC Skylab, for info we'll be dumping your data recorder now.
CC Skylab. PLT. No need to acknowledge when you did the trash airlock. Dump while ago we did see a slight rise in pressure in the waste tank.
SC (garble)
CC Skylab, Houston. One minute till LOS. Ascension at 59.
SC Yeah, (garble)
PAO This is Skylab control 19:50 GMT. Loss of signal as the Skylab cluster passed over the hill from the Bermuda tracking station. 8 minutes now to Ascension. Ascension Island tracking station for 5 minute pass fairly low elevation angle. On revolution number 190 for the workshop. Another quiet state side pass. Joe Kerwin went back up into the airlock and multiple docking adaptor to terminate bakeout as one of the molecular sieve beds, and he had reported that he had already gone through most of the routine for activating the star tracker for the telescope mount. The workshop guidance system. 7 minutes till Ascension and at 19:52 GMT this is Skylab control.

END OF TAPE

SL-II MC-157/1
Time: 14:57 CDT 14:19:57 GMT
5/27/73

PAO This is Skylab Control 19:57 Greenwich mean time. A minute and a half out of the Ascension Island tracking station, just grazing the edge of the station circle for the last time today. Next rev, we start picking up the tracking ship Vanguard. And the final pass through Carnarvon of the day as the orbit precesses westward. The television on the monitors in the news room is a playback of the earlier television from the workshop. This may be played back any number of times during the day as different people request to look at it. We'll stand by now for a fairly brief conversation through the Ascension Island station. Five minute total tracking time over Ascension. Skylab Control Standing By.

CC Skylab, Houston through Ascension for 6 minutes.

CDR Roger.

CC For the CDR no need to acknowledge, EGIL recalculated the CSM power, and it's pulling about 900 watts.

CDR Roger. Do you know how many days that gives us? An estimate.

SPT Let me ask you, while you're thinking that one over, Houston, This is the SPT. I'll give you some food temperatures. The temperature in locker 749 was 104. The air temperature is 98. The temperature inside food locker 562 is 116 degrees and the temperature on the surface of food locker 555 is 110. Over.

CC Roger. Copy. About what time did you take those, Joe?

SPT I just read the latter two a few minutes ago. The air temperatures and the locker temperatures were taken about 30 to 35 minutes ago.

CC Roger. Copy.

SPT Yeah, the food lockers are as of right now.

CC Joe, how are the temperatures in the film vault?

SPT Hank, between star tracking and vent systems, I haven't got back to the film vault yet. I'm about ... Okay, the temperature in W-706 in the two locker is 106 degrees so the crew is splitting all the pills in that locker between them, and we're going to eat them today.

CC Roger.

SPT Be advised, orr OWS (garble) cage has come off the deg and reads 197.5.

CC Roger. 97.5.

SL-II MC 157/2
Time: 14:57 CDT 14:19:57 GET
5/27/73

SPT It's falling.
CC We've got about a minute to LOS. We come up on Carnarvon at 30. Before we loose contact here if its convenient, we'd like to get a progress report.
SPT The PLT is still trying to get the urine system activated, and the CDR is right now in the process of activating the condensate holding tank.
CC Roger. Copy.
PAO This is Skylab Control at 20:04 Greenwich mean time. AOS Carnarvon in 24 minutes. Crew reported that the ambient atmospheric temperature in the workshop was down now to 97.5, at least by their readings. The food locker temperatures were in the same range, 98 and 106 respectively, in the locker air, and the locker structure wall itself. Twenty-Four minutes to Carnarvon, and at 20:05 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-1I MC-158/1
Time: 15:26 CDT 147:20:26 GET
5/27/73

PAO This is Skylab Control, 20:27 Greenwich Mean Time. Skylab Workshop in the Southern Indian Ocean, midway through revolution 190. Little over a minute out of Carnarvon, with a 6 minute gap from loss of signal at Carnarvon, skipping across the Republic of Indian - Indonesia to the Guam Island tracking station. We'll leave the circuit up for this small gap from one station to the other. From Guam across to Goldstone is approximately 15 minutes for fairly solid stateside pass on revolution - end of 190 and the beginning of 191 - Goldstone, Texas, and Mila Bermuda has been released because it is such a low elevation angle pass this time. It has been released for the remainder of the day. Should be getting AOS here momentarily through Carnarvon we do have data. Skylab Control standing by.

CC Skylab, Houston. Through Carnarvon for ten minutes.

SPT Houston, this is SPT want some (garble) How about some (garble) temperatures.

CC Okay, go ahead.

SPT Okay, this is with the digital thermometer. Drawer Bravo was 106.8. Delta was 107.0 Foxtrot was 106.0, Hotel was 108.5, Juliet 107.5, and drawer Kilo, on a S191 film container was 106.3. The hottest part of the vault was the door which was 109-1/2.

CC Very good report, Joe. Thank you.

CC Skylab, Houston. When convenient, we'd like to terminate the Bat-B charge.

SPT Roger.

CC And, also Skylab, Houston. If not already done so, we'd like to terminate the bed 2 bakeout. And after a fifteen minute interval you're clear to activate mol sieve A.

SPT Roger, Houston. We'll get the Bat-B charge in a minute and (garble) the mol sieve. It has been terminated and we'll activate mol sieve A in a minute. But keep reminding us, we're awful busy.

CC Roger, will do. And we're about 30 seconds from LOS. We should be coming up on Guam at 43, but they've been having trouble with their USB, we may not have comm there. If not, we'll pick you up at Goldstone at 08.

END OF TAPE

SL-II MC-159/1
Time: 15:40 CDT 147:20:40 GET
5/27/73

PAO This is Skylab Control. That scratchy noise was loss of signal from Skylab as it went over the hill from Carnarvon. Two and a half minutes to Guam. We may not have voice contact through Guam in as much as the station has been having trouble with its unified S-Band equipment. But, at any rate, we'll leave the circuit up for the Guam pass, just in case there is additional conversation. At 20:41 Greenwich mean time and standing by, this is Skylab Control.

CC Skylab Houston through Guam for 9 minutes.

CDR Garble)

CDR Roger Houston. Bat B charge is being terminated at this time. Mol sieve A is coming on the line and the condensate holding tank is taking a long time (garble) doing some other things at the same time like working through (garble) we'll have to bring you up to date a little later on.

CC Roger Pete. You were getting a lot of interference feedback through the speaker boxes. It's difficult to understand you there.

PLT Battery charge is terminated.

CC Copy.

CDR Hank, give me a short count. We're trying to set the volume on these things.

CC Okay, 1, 2, 3, 4, 5, 5, 4, 3, 2, 1. Houston out.

CDR Okay, I think I've got most of the feed out of it now. How's that?

CC Hey, that sounds a lot better.

CDR Okay, it turns out that the wardroom box and the box next to panel 611 feed very badly with the boxes under each scientific airlock, which we've never seen before.

CC Roger, copy.

CDR And you did say Hank, you want us to go ahead and put the mol sieve A on the line, right?

CC That's affirmative.

CC Pete, how long have you been working evacuating that holding tank?

CDR I've got the 9 minutes on the oneside, and I am 20 minutes into the other side for a 30 minute fold.

CC Roger, copy.

CC Those times sound pretty close to nominal Pete.

CDR Yeah, that's for the checklist, Hank.

CC CDR Houston. No need to acknowlege. We've been looking at the flight plan here, and it looks to us like that we should be concentrating on completing

the water system activation as you suggest. Try to get one suit to drying. Ge' the decomprocessing going and activate the SMMD. It seems to us that those ought to be the priority items.

CDR Every one of those things is in work. The urine are in work, the fecal processing is in work the suit drying is in work. Joe has been estimating some of that. And I'm working on water system, and so is Paul. I think that by tonight we'll have the wardroom on the line and water system on the line one suit being dried,all the waste management is running correctly and with that, we'll probably give it up.

CC Roger, that sounds good Pete, we concur.

PLT Are you there Houston?

CC Go ahead.

PLT Be advised that I had to use the secondary primer on mol sieve A. Primary didn't start it.

CC Roger, copy.

CC We'll smoke that one over. We're about 30 seconds from LOS. We should picking up Goldstone at 08.

CDR The circuit breakers are closed.

CC Roger, copy.

PAO This is Skylab Control at 20:53 Greenwich mean time. Skylab space station passing out of acquisition by the Guam Island station which apparently had repaired their S-band equipment, because we did have voice communications through that station. Goldstone in 14-1/2 minutes. And it is very likely that we will have additional television from inside the workshop. Also during this recent pass over Carnarvon, the film vault temperatures were read up, read down by the crew. They ranged generally to 106 to 108 in the different locations where the portable thermometer had been inserted in the film vaults. Activation of the workshop is proceeding fairly well. In fact, they tend to be somewhat ahead of the time line and anticipated the call-up by the Capcom on suggestions to proceed with suit drying and fecal processing. And Conrad stated that most of these items were already in work. Goldstone, Texas and Mila stateside pass starting in 13 minutes. At 20:54 Greenwich mean time this is Skylab Control.

END OF TAPE

SL-II MC-160/1
Time: 16:06 CDT 147:20:07 CET
5/27/73

PAO This is Skylab Control at 21:07 Greenwich mean time. About 40 seconds now, from acquisition through Goldstone for the stateside pass, which will hopefully will include onward television. Here's a call to the crew.

CDR Okay, Houston, unless you want us to turn the camera on in the same location, we don't have anything to give to you, we've been too busy.

CC Okay. No problem.

CC You are turning it on, aren't you Pete?

CDR I will, just a second.

CC Skylab, Houston. We're going to uplink drift compensations for the X and Y GYROS and we need you to be off the DAS.

CC Okay, we got a good picture.

CDR Hey, Houston, we just had a momentary sieve (garble) went off.

CC Roger. Copy.

CDR Hey, Hank, we got a good switch over timers on the (Garble) mol sieve. They're on the secondary timers.

CC Roger. The ship operation looks good to us down here.

CDR Okay.

CDR Commence beds switch over.

CC We're troubleshooting that primary timer problem. We're not sure if you turn it on it's supposed to do an immediate cycle. We're trying to check it out.

CDR Well, I'll tell you - -

CDR We just had a sieve A drift pole light on for about 10, 15 seconds, went right back out.

CC Roger. We recommend you inhibit that caution and warning there until the sieve stabalizes.

CDR Think we can expect that for awhile?

CC Roger. That's affirmative.

CDR Okay. How about if we inhibit it for now and, you remind us later on today to enable it, all right?

CC Roger. We will do that.

CC Looks like you're dragging a body around there.

CC And Skylab, for info, we'll be dumping the data recorder over Mila, and that's coming up in about another minute.

CDR Hey, Hank, you guys watching the TV?

CC That's affirmative.

CDR Okay, I want to show you the data card kits. They made them wrong, and none of them fit.

SL-II MC-160/2
Time: 16:06 CDT 147:20:07
5/27/73

CC Okay, we're looking at a (garble)
CC Okay, you got the bags right in the middle of the picture now.
CDR The snaps on the end of the straps are too small.
CC Roger. We saw it.
CC Skylab, Houston. We're about 1 minute from LOS. Vanguard will be coming up at 34. That was a good show.
CDR Roger. We're getting there. Slow, but sure.
PAO This is Skylab Control. Loss of signal through the Mila station. The spacecraft now over Northern Brazil. Still 8-1/2 minutes now until acquisition at the tracking shop Vanguard. Seven minute pass over the Vanguard. Fairly interesting television transmission from the spacecraft during this stateside pass, with its eight succeeding series of TV pictures, it appears the crew is even more adapted to zero g in maneuvering their bodies up and down the workshop into the various spaces as they activate systems and move equipment around. At 21:26, up again in 7 minutes for Vanguard, this is Skylab Control.

END OF TAPE

SL-II MC-161/1
Time: 16:33 CDT 147:21:33 GET
5/37/73

PAO This is Skylab Control at 21:33 Greenwich mean time. One minute out from acquisition by the tracking ship Vanguard, still in position off the southeast coast of South America. After Vanguard, it is about an hour and 3 minutes until the next station, which will be Goldstone. This rev 191 misses Carnarvon and Guam. It crosses Singapore near Saigon over Taiwan and up the Japanese island chain south of the Aleutians and then starts downward on the descending node through - along the west coast of the United States and across Baja California and back out in the Pacific. Should have acquisition now through the Vanguard; 21:34 standing by, Skylab Control.

CC Skylab, Houston through Vanguard for 5 minutes.

CC Skylab, Houston. We've got you for another 5 minutes through Vanguard.

PLT Roger, Houston.

CC And Skylab, Houston, we need to get somebody up to the command module for a couple of items. We're expecting a caution and warning, if you haven't already gotten it on the condensor exhaust temperature for fuel cell. They are getting too cold. We need to take the fuel cells 1 and 3 radiator switches to emergency bypass.

PLT Okay. Roger.

CC And while you're up there, on panel 250 we'd like to get the main bus interconnect circuit breakers, main A and main B closed. We want to tie the buses together.

PLT Okay.

CC The reason for that is load sharing. Fuel cell 3 is carrying three times the load of 1 because it is carrying all the AC.

PLT We don't have to close any breakers to get those radiators in bypass, do we?

CC That's negative. Just throw the two switches on panel 3.

PLT Okay.

CC We're checking that circuit breaker question.

CC Okay, you might check those circuit breakers on panel 226. The RAD bat relay circuit breakers 1 and 3. They verify that they're closed. If they're not, close them.

CDR Okay Hank. Even before looking, I'm quite sure they're good. I don't think they have been closed the whole mission.

CC And after you close the circuit breakers

SL-II MC-161/2
Time: 16:33 CDT 147:21:33 GET
5/27/73

and throw the switches we would like for you to pull the circuit breakers again.

CC And before we lose comm here, which is a pretty low elevation pass, we would like to verify that somebody has turned the TV off.

CDR Okay, we'll take care of it and we'll see that the radiators are in bypass.

CDR Hello, Houston.

CC Roger, go ahead.

CDR Just had a fire alarm in the OWS heat exchanger compartment. We don't see anything. I turned off the alarm and reset it again. And it must have been a (garble). We don't see anything. Anything you'd like us to look at in there?

CC We're looking and we're just about to lose you for a long LOS. Keep an eye out. Everything looks okay down here, at a cursory glance. We'll see you over Goldstone at 22:45.

CDR Okay.

CC We're right in the middle of the south Atlantic anomaly. I don't know whether I'd accept that thing or not.

PAO This is Skylab Control 21:42 Greenwich mean time. We've had LOS from Vanguard. Next pass over that ship will be a little bit longer duration, higher elevation angle. At about 61 degrees, we're now in 2 minutes away from Goldstone. No further tracking station until Goldstone. Goldstone and Texas - it shaves down the edge of the California and Baja California and Mexican coast, and moves out into the Pacific on descending node for the next several revolutions, beginning to come back across the Indian subcontinent and central Asia and China on the ascending nodes. And hour and 1 minute to Goldstone. And at 21:43 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-162/1
Time: 17:20 CDT 147:22:20 GET
5/27/73

PAO This is Skylab Control at 22:20 Greenwich mean time. Skylab space station now over the east coast of Indo China between Indo China and the Phillipines. And we'll shortly cross Taiwan. We're still 24 minutes out of Goldstone. At the present time flight controllers are viewing the replay of the last stateside pass onboard television. This TV is being piped over to the Houston News Room. It's simply a replay some 20 minutes or so of television that were piped down from Skylab through Goldstone Texas and Mila. One apparent thing in the TV is the adaptation that the crew has successfully taken on and moving around to zero g. They make it appear simple. We'll be back again in 23 minutes for a brief stateside pass through Goldstone and Texas the last of the evening. The following rev will start coming through Hawaii and Vanguard. And at 22:22 Greenwich mean time this is Skylab Control.

END OF TAPE

SL-II MC-163/1
Time: 17:44 CDT 147:22:44 GET
5/27/73

PAO This is Skylab Control. 22:44 Greenwich mean time. About 40 seconds out from acquisition for the final stateside pass for the evening, Goldstone and Texas. The teleprinter questionnaire will be uplinked to the crew during this pass. A few questions about apparent condition of the food, particularly the canned food. Some questions from the Surgeon on their work cycles; how long they could work without having to take a rest break, and their subjective appraising of how working in the Skylab workshop has been under the elevated temperatures. The answers to the questions will be discussed later on air-to-ground. There will be no TV during this stateside pass. LOS in 12 minutes. We're live now for the conversation across the state.

CC Skylab, Houston. We're clearing an ACS alert, for information.

CDR Okay.

CC And did you have any more of those fire alarms?

CDR No, we didn't. I got that sensor clean out of there. The one that looks into the back of the package, and not looks at the fan. Took the sensor clear out of there, shined my flashlight down in there, and I couldn't see anything. It's just a black hole down there, that's all. Don't asked me lit it off we put it back in, retested the system that's okay, and (garble).

CC Roger, copy. And we got some good news on your bags there, at least we've found a replacement. In W751 there's some utility bags and I think those will make a good substitute for your data card bags.

CDR Okay, there is that, 751?

CC That's affirmative. We did check those in the trainer and they work okay.

CDR Okay, I don't know how heavy small samplers but I would think (garble) later. 751 we'll look, thank you.

CDR Hey, I wrestled my way through that condensate gate. I think it's all complete - it's all evacuated. That's as far as the procedure goes. We had a few items between there like which ones in the command module and so forth. I'm just finishing up the flight data file stowage right now. I'm on my way to 742 while passing (garble) 126 and so forth. So we're slowly getting organized.

CC Roger, copy.

CDR Everything we just finished spending a little time on was - we thought we had the (garble) system all rigged up and it wouldn't work. I was the test subject and I had a big failure. And we went back and regrouped on it and we've concluded that you have to have a fecal bag in the thing.

You have to have the fecal bag there a certain way or you just don't get enough vacuum through the urine system enough flow, to pull urine down the urine tube, but the othr two guys have been working on that down for a while. They say it works okay.

CC Roger, copy.

PLT Hello, Henry. Look at page 101, will you please.

CC Go ahead.

PLT Under PLT there, the first step there. (garble) water tank work (garble) and move.

CC Okay, we give up.

PLT About an extra half, notifying you.

CC Okay.

PLT Not only that, but I'm not continuing per the checklist.

CC Okay, stand by for a minute.

CC Paul, we'd like to verify that you completed the water purge after we terminated that time.

PLT Okay, this is screwed up, doing this stuff in bits and pieces, interrupted and that, that I don't know what I've done, but I have accomplished everything in the checklist up to this point. As spelled out in section Bravo (garble) Flight Plan.

CC Roger, copy.

PLT As I remember, I did not finish a 15-minute suck on the wardroom water heater, when you called me and want it terminated. After that then I think I did a 5-minute purge on the chiller.

CC Okay, the message I guess follows, is to press ahead, we think it's okay.

PLT I was hoping you'd say that.

CC PLT, Houston. We'd like to get you to turn those 35 psi torggles on, one at a time so we can watch them.

PLT Is that the nitrogen regs you wanted one at a time?

CC That is affirmative.

PLT Okay.

CC And another thing we'll throw out for consideration here. It looks like to us that the momentum management is almost perfect, and we'd like to bring the star tracker up according to the pad we gave you. Acquire and enable star tracker update. That's 52011, 30011. You can do that anytime prior to Vanguard, which is 23:10.

PLT Okay. Here comes reg A.

SL-II MC-163/3
Time: 17:44 CDT, 147:22:44 GET
5/27/73

PLT — Hollet when you're ready for B.
CC — We're still looking for reg A.
CC — We're seeing it come up - number 1 is coming up after one more thing about the star acquire, after you get the star tracker on the line we want to make sure you inhibit the MFC.
PLT — Do you see any (garble) at all, Henry, I'll tell you, that - when I opened the reg, I heard some rattling noises in the line, and the pressure on the potable water tank is coming up very very slowly, if at all.
CC — Roger, we think it will take a while because all the lines have got to come up.
PLT — Okay. Also, you know water tank 1 is right at what is now the hottest spot on the interior of the vehicle. So I'm not sure any reading I have are going to be any good. And in wardroom 2 is going to have to work it's little heart out to cool that stuff off.
PLT — Actually tank 1 ain't so bad, tank 2 is the one that's really a heartbreak.
CC — Okay, let's go ahead with the other reg now.
PLT — Okay, they're both on and I can hear the nitrogen flowing a little faster, but not much.
CC — Roger.
CC — And Skylab, EGIL says the sieve flow looks real good now, very stable, and so you're clear to enable the sieve flow caution and warning any time you wish.
PLT — Okay, thank you.
PLT — Hank, can I open the pressure valve to tank 7 now, or do you want me to wait until the pressure comes up in the line a little more.
CC — Okay, you can press ahead.
PLT — Okay.
CC — And we're about 30 seconds from LOS. We'll be picking up Vanguard at about 11. And don't forget to inhibit the MPC.
CDR — Rog.
PAO — This is Skylab Control. 22:58 Greenwich mean time. Final stateside pass of the day across Goldstone and Texas tracking stations. Skylab cluster now due west of the Isthmus of Panama. And slightly over 11 minutes away from the Vanguard tracking ship. Current orbit measurement 234.9 nautical at perigee, and 239.8 at apogee. Orbital period 1 hour 33 minutes 14 seconds. Next conversation with the crew over Vanguard in 11 minutes. At 22:59 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-11 MC-164/1
Time: 18:10 CDT 147:23:10 GET
5/27/73

PAO This is Skylab Control, 23:10 Greenwich mean time. We should be in acquisition now through the tracking ship Vanguard. Standing by for resumption of conversation between spacecraft communicator Hank Hartsfield and the crew of Skylab.

CC Skylab, Houston through Vanguard for 6 minutes.

CDR Hello.

CC Skylab, Houston. We've got a dump maneuver starting now. You're going to have to wait on that star tracker. Wait until next daylight.

CDR Okay, Henry. Nobody was quite sure who was doing it.

CC No sweat, don't worry about it. In the teleprinter there, you're going to find a few messages. We'd like for you to browse those over in preparation for our evening status report that will be over Hawaii at 01:50, just another reminder. Later on this evening, we'll start our commanding in support of the -commanding to the APCS in support of the unattended checkout of the ATM.

CDR Roger.

CC We should be sending the first commands up over this site.

CC And Skylab Houston. If you have no objections, we won't give you a running account of what we're doing on this unattended checkout.

CDR That's Okay.

CDR (garble)

CC Skylab Houston. We're about 30 seconds from LOS. And the next contact is Hawaii at 19.

PAO This is Skylab Control. Apparently we have had loss of signal from the tracking ship Vanguard. Hawaii in 59 minutes. A very low elevation angle pass on the northeastern quadrant of the Hawaii acquisition circle, only 4 degrees - a very short pass of 3 minutes. All going well aboard the space station at the present time as the crew continues to activate the various equipment and systems aboard. And as mentioned by Hank Hartsfield to the crew during the Vanguard pass, we will start ground commanding some checkout runs of the Apollo telescope mount - ATM experiments and systems. In about an hour and a half, some of the initial commands were up-linked at Vanguard. But most of these checkouts will begin at about 8:00 p.m. central time. Fifty-eight minutes from Hawaii. The spacecraft over the south Atlantic midway between South America and the African continent. At 23:21 Greenwich mean time, this is Skylab Control.

END OF TAPE

S-II MC-165/1
Time: 19:19 CDT 148:00:19 GET
5/27/73

PAO This is Skylab Control. 00:19 Greenwich mean time. Due to acquire at Hawaii for a very brief pass across the northwest - northeastern edge of the Hawaii circle.

CC Through Hawaii for three minutes.

CDR Hi there. How goes it. I'm, up to my ears in stowage transfers. I don't know what the rest of the guys are doing.

CDR The PLT and the SPT are in the (garble) moving food boxes.

CC PLT, Houston. Are you finished with the water system now?

CDR Yes, he is, and the SPT has the SMMDs activated, and the Command Module food transfer done, but not the ambient food transfer.

CC Roger. Copy.

CDR You guys better start gimbal angles minus 660 plus 620, I can't get anything here.

CC Okay, we'll work on it and, as a matter of interest, too, Pete, we see that the condensate tank Delta P is down to about 1.34. It probably won't make the night, so some time this evening you should plan on connecting the condensate dump port up to the holding tank, as outlined on page 137.

CDR I'll be in the midst of the stowage transfer on 2-146.

CC Roger. Copy. No rush on that condensate thing. I just wanted to make you aware of it. It's something we'll probably have to do this evening. And we're about 20 seconds from LOS. We'll be coming up on Vanguard at 47, and we'll get a recorder dump there.

PAO This is Skylab Control. Very brief conversation there, across Hawaii. Pete Conrad commented that he was "Up to my ears in stowage transfers" moving some of the stowage lockers from the lashed down position on the deck down to their permanent flight position. Paul Weitz commented that he was in the process of moving food boxes to their final location. Temperature readings in most of the locations are still in the 90 range, however one sensor in the wardroom wall had got below 90, and was indicating 89. All the others are still in the 90s. Workshop atmospheric pressure, 5 pounds per square inch. Partial pressure of carbon dioxide is 3.3 millimeters of mercury. In as much as the Skylab crew is all Navy, the Capcom console has a fairly large plackard attached that says "Sailors have more fun" I guess that all depends on where they are. 21 minutes to Vanguard, and at 00 hours 25 minutes ground elapsed time, this is Skylab Control.

END OF TAPE

SL-II MC-166/1
Time: 19:46 CDT 148:00:46 GET
5/27/73

PAO This is Skylab Control 00 hours 46 minutes Greenwich mean time, about 15 seconds from acquisition through the tracking ship Vanguard. Waiting for Vanguard to lock up on the spacecraft. A 10 minute pass almost directly - well, not really.

CC Through Vanguard for 10 minutes.

SC Roger.

CDR Hey Hank.

CC Go ahead.

CDR I may have goofed there if you see something funny on your ATM. I didn't think we were - I didn't hear that one thing that you passed, and I didn't think we were supposed to be in experiments pointing, so I went to SI. Then Joe told me we were supposed to be experiment pointing so I went back there again. I hope I didn't goof anything up.

CC It looks okay now, Pete. That should be all right.

CDR And be advised we're on the big condensate tank.

CC Good show.

CDR Will you have the stowage people check and see if there was a CM21 35-millimeter empty casette on board. It should have been empty if it's onboard at all.

CC We'll check.

SPT Houston, this is SPT.

CC Go ahead.

SPT I've got a question about suit drying. I had thought I heard preflight that we were not going to use the suit dryer. However, the procedure said to use it and I went ahead and started the first suit. Is that right?

CC You're absolutely correct, Joe. We want to dry the suits (garble) with the dryer.

SPT Okay.

CC The change we're not baking the (garble)

SPT Okay.

CC Okay, and I have a star pad now for somebody if they want a copy that you can use when you get back into daylight.

CDR Go ahead.

CC Okay, the star's Canopus 50,001 it is available day at 2950 to night 0448, OUTER GIMBAL plus 1770, INNER GIMBAL minus 0667. And this is valid from 0045 to 0545.

CDR Okay, you want us to get it going in ENABLE STAR TRACKER update. Is that correct?

CC That's affirmative and we need it prior to Hawaii, and we need after you do it MPC inhibit.

CDR Okay.

CC We're going to be driving the wedges Pete over here in Hawaii.

CDR Okay. When do we get to Hawaii?
CC Hawaii is coming up in 55.
CDR Okay, I'll go do it right now.
CC Not this 55, an hour - a little over an hour from now.
CDR Oh, okay.
CDR Hey Hank, did ya'll decide the film vault was cool enough for me to take the ETC magazine down yet or not?
CC We'd like to leave it in the command module overnight, Pete.
CDR Okey dokey.
CC I'm informed now that that's scheduled for a day-6 transfer.
CDR Okay.
CC Pete, we've been looking at this star pad and, you know, I gave you it was available with 2950 of day remaining. It turns out that's about 5 minutes prior to Hawaii.
CDR Okay. Give me AOS Hawaii, exactly.
CC Okay. Hawaii AOS is at 01:55. So, as soon as it becomes available, we'd like you to get right on it so we can be ready to start commanding as soon as we get acquisition.
CDR All righty.
CC Skylab, Houston. We're about 1 minute from LOS. We'd like to remind you we plan to do the evening status report in Hawaii in the pass coming up. And we'd like to be prepared there to discuss the pad we've up-linked and our plans for tomorrow.
PAO This is Skylab Control at 00:57 minutes Greenwich mean time. Our space station sinks slowly in the east, away from the Vanguard tracking ship at the beginning of revolution 196. Would you believe 193? To summarize the day's activities, the temperature trends have been downward in the workshop during the day. Some of the temperatures have gotten into the low 90's and in one location, one particular sensor in the ward room area, temperatures down below 90, at 89. We've had two television passes from the workshop dome camera location during the day, showing the crew in rapid adaption to zero g, sailing up and down through the openings in the grid decks, moving equipment from the launch stowage positions to the operational locations. The crew has begun the suit drying procedure. They've activated the fecal processing plant. Here on the ground, the Apollo telescope mount experiments and systems will be checked out remotely through the network. The first commands were

SL-II MC-166/3
Time: 19:46 CDT 148:00:46 GET
5/27/73

went up over Vanguard last revolution - revolution 192. Also a rev or two ago, a teleprinter message with several questions from the flight surgeon were relayed up, which will be discussed during the upcoming Hawaii pass in some 54 minutes. Currently, the orbit measures 234 by 239 nautical miles. At Hawaii, the evening fireside chat will be held to discuss tomorrow's activities. And also the before mentioned questions from surgeon on the work-rest cycle and activating the workshop. Fifty-four minutes from Hawaii, we're on the backside of the orbit now where Hawaii and Vanguard are the only two stations for the next couple of revs. As we move farther westward, we start picking up Guam in the early part of the descending node. The spacecraft will be crossing the Cape of Good Hope across the tip of South Africa in a few moments. And at 1 hour and 1 minute Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-167/1
Time: 20:54 CDT 148:01:54 GET
5/27/73

CDR Roger, Houston.
CC And roger, we need status reports.
CC We need the MPC inhibited, first off.
CDR Joe left it on and we're sorry.
PAO This is Skylab Control. Conversation in progress through Hawaii. An early AOS here, according to the clock.
CDR Okay, let us give you the - we have voice recorded on Channel A
CC Okay. We're ready to verify that.
CDR Okay, on the food log, you will find the complete food log for day 1 and 2 on A channel record. Okay? Just to speed things up, the records will be tomorrow on A Channel. Today, day 3, let me give you the Alpha urine volume. CDR 210. SPT 160. PLT 200. Now we got a set of water gun readings that are initial water gun readings that we started out with about 4 hours ago. Better write these down, and then tomorrow on the next evening status report, you'll have about 4 hours - you'll have about 3 hours of today's water and all of tomorrow on it. CDR's water gun initial reading at activation was 3338, the SPT's was 6828. The PLTs was 1892.
CC Copy.
CDR Today, we have no body mass to give you, no exercise to give you. We'll cover item Echo on the COM tonight. Although there isn't anything to report, we're in good health. And let me read you today's food log.
CC Let it go.
CDR Okay. The CDR ate everything today, except corn. The reason for that was the bag failed when inflating with water, and I got corn all over everywhere, but couldn't eat it. Now, for yesterday, Joe calculated that I should have taken, and I did take, two magnesium, two calcium pills. Now, SPT didn't eat his biscuits or jam for breakfast. Drank coffee and butter cookies for snacks, and his nominal pills for the day before yesterday were one magnesium, one calcium, which he took. And the PLT ate half his bread. He did not drink his coffee with sugar for breakfast. For lunch, he didn't eat his asparagus or bread, and for a snack he did not have his coffee. And he had one magnesium. And the H20 shots that I'm going to give you are from the command module guns so they're half-ounce shots. CDR had 40, SPT had 6, PLT had 60. There were no DELTA H20s. There were no salt pack usage. And tomorrow morning I will take one calcium. Joe has none. Paul has none. Plus anything you send up for us.
CC Roger, we copy.
CDR Copy all that.

CC Roger, we copy.
CDR Okay. Now, I'll give you a film status tomorrow. The only film we used was during rendezvous and I'll itemize that out for you. Bring you up to date tomorrow, when we get going. We would like you to send us, tonight again, the procedures for the probe. The first eight steps were okay, then you transmitted a second message. It is split, and half garbled and the lines are jumped, and I'm not exactly sure what it says. We request a retransmission on that.
CC Wilco.
CDR We are a little bit behind on day 4. However with regroup the next day, we will have it all made up and we'll get back with it at noon tomorrow. As far as we could tell all stowage is still as specified, unless you find the changes as noted on A record. That's it for the status report.
CC Okay. We'd like to talk about the flight plan. We've got about 4 minutes left, Pete. How we saw things was perhaps; the first thing tomorrow is to just sort of pick up where we left off and work on through, with a couple of exceptions. There will be a press conference tomorrow and we figure lunchtime is about the best time to do it, at about 18:40, and there will be a trim burn coming at about 01:07 - about a 29-second burn time. Those, I think, are the only changes.
CDR Okay, the press conference is when?
CC Roger. It'll be about 18:40.
CDR On TV?
CC That's affirmative.
CDR Where do you want the TV?
CC Okay, wait a minute. There's been a change in the press conference time. It's 17:04.
CDR 17:04 in the wardroom, right?
CC That's affirmative.
CDR For the trim burn is when?
CC At 01:07. That'll be after dinner, in the evening.
CDR Okay. 29 seconds drive roughly.
CC That's affirmative.
CDR I figured I'd break the orb trying to dock the other night. I almost deorbited the thing.
CC (laughter) It's still there. We checked on the cassette you asked about. It is not on board. That container.
CDR Okay, I sure looked hard, but I'm glad it's not on board. Okay.

CC Okay. We would like - -
CDR I've located everything else.
CC We would like to know where you plan to sleep tonight?
CDR I think we'll sleep in the command module again. Our initial temperature is 94 now. Our biggest source of heat is the water tanks. Man, do they store heat, and they're really putting it out - by tomorrow morning.
CC Okay. We dropped out there for about 20 seconds. Can you repeat what you just said,Pete.
CDR Yes, we're going to sleep in the command module tonight. Our biggest source of heat in the workshop is that of the water tanks. It's just going to take them a long time to give up their heat.
CC Okay, if you sleep in the command module tonight, Pete, we need you to bring up one BMAG, and we'll also need one of you to wear an OBS.
CDR Everybody just decided to sleep in the MDA, Hank.
CC Okay, if you sleep out there, we'll need to bring up an inverter. We've got to get some heat in the command module.
CDR Okay, we'll be glad to bring up the heat.
CDR Which one do you want, BMAG or inverter?
CC Where you gonna sleep?
CDR In the MDA.
CC Okay. How about bringing up inverter 2?
CDR Okay. We'll do it right now.
CC Okay, wait a minute. Inverter 2 is already on, I'd bring up inverter 1 with it.
CDR Okay.
CC Okay. We're about 20 seconds till LOS.
CDR - be water in inverter 1.
CC I didn't copy that. We're 20 seconds from LOS. Vanguard's coming up at 47, and you'll have your med conference there.
CDR Okay.
CC And Skylab, Houston. In regard to the questions we sent up. We'd like you to put those on the recorder.
CDR Okay. We'll also put our comments - -
PAO This is Skylab Control, 2 hours 5 minutes Greenwich mean time. Space station is gone over the hill from Hawaii. Vanguard in 19 minutes 50 seconds. Conrad mentioned, while over Hawaii, that the workshop temperature was now down to 94. The ground read up the time for the press conference tomorrow - 17:04 Zulu, which computes out

to be 12:04 central daylight time. The crew will be in the wardroom for that press conference, in which news men covering the Skylab mission will pass up questions to the crew. Trim burn is scheduled for 8:07 p.m. central daylight time tomorrow. And, as mentioned toward the end of that Hawaii pass, the medical conference for the day will be through Vanguard, on the upcoming pass in 18 minutes. Some other operational information will be passed up to the crew toward the end of that pass. At 2 hours 7 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-168/1
Time: 21:16 CDT 148:02:16 GET
5/27/73

PAO This is Skylab Control, 2 hours 16 minutes Greenwich mean time. Skylab space station now over the south central Pacific. Nine minutes away from crossing over the tracking ship Vanguard for the final conversation of the evening before the crew goes to bed. We're now looking at a change of shift briefing with off-coming Flight Director Neil Hutchinson one half hour from now at 9:45 central time in the Johnson Space Center Newsroom. Repeat, estimate press conference - change of shift press conference with Flight Director Neil Hutchinson one half hour from now, 9:45 central. Up again in 8 minutes for the final conversation wit the crew of Skylab over Vanguard. At 2:17 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-169/1
Time: 21:25 CDT 148:02:25 GET
5/27/73

PAO This is Skylab Control 2:25 Greenwich mean time. Less than a half minute out from tracking ship Vanguard for the final conversation pass of the evening before the crew goes to bed. This pass will be shared by the flight surgeon in a medical conference. Turned back over to the operational people for the last portion of the pass, which is a total of 8 minutes 57 seconds across Vanguard. Therefore, the first 4 minutes or so will likely be silent. But we will leave the circuit up for a resuption of operational conversation. At 2:26 GMT standing by, this is Skylab Control.

PAO This is Skylab Co trol. We've had loss of signal through Vanguard. Apparently the entire pass taken up by the medical conversation. The surgeon did not revert back to the operational room. AOS Hawaii in 56 minutes. However, the crew should be in their rest period at that time. At 2:36 Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-170/1
Time: 22:32 CDT
5/27/73

PAO Skylab Control at 3 hours 31 minutes 20 seconds Greenwich mean time. We've just had the horn signaling acquisition of signal in Hawaii, here in the Mission Control room. At the present time the spacecraft is on its 194 revolution about the Earth. We received just a few minutes ago the daily medical bulletin from Dr. Royce Hawkins. This is a bulletin that is put out after the private press conference, private conferenve between the doctor and the members of the Skylab II crew. This was held during the Vanguard pass at 9:25 and following 9:25 p.m. central daylight time tonight, the last Vanguard pass earlier on this revolution. The report is this: All three Skylab crewmen are in good health. They have all had some mild nasal stuffiness, which has been relieved with nose drops. They had no ill effects from the thermal environment of the orbital workshop during the days activity. Signed Dr. Hawkins. I might point out that nasal stuffiness was also a problem with some of the Apollo missions and appears to be in some way associated with the zero g condition. At the present time, we're expecting to get acquisition of signal in Hawaii. It is believed that the crew should be now asleep. They were expected to go to sleep about 10:00, and they are scheduled to wake up at approximately 6:00 a.m. tomorrow morning. And we will be staying up for the next couple of minutes to see what sort of data we're getting back from the Hawaii tracking station. We have about a 6 minute pass at Hawaii.

PAO Skylab Control. We are just now beginning to receive some data after acquisition of signal in Hawaii. And we can see that both of the coolants loops are still operating to attempt to cool down temperatures in that workshop. And of course, those coolant loops are also used for the various refrigeration and freezing equipment onboard the spacecraft. Both coolant loops are operating normally. Once the temperatures get down a little to conserve power, we'll work only 1 coolant loop. One coolant loop should be sufficient for most of the mission.

PAO Skylab Control. We are not yet getting any data because of number of things that are being asked by various mission controllers. We're not receiving any data on the temperatures. The last temperatures we did receive indicated that there was a range of temperatures from about 92 to 100 with many of them hovering right around the 92 degree area. That seems to be the condition as far as we know. We have not had a pass of course for about an hour And if we do get some data from that area, we'll come up a little bit later and let you know what happened.

SL-II MC-170/2
Time: 22:32 CDT
5/27/73

This is Skylab Control, and I'll be going off now at 3 hours and 34 minutes and 56 seconds Greenwich time. We still have acquisition of signal. And we'll stay up and listen for any possible calls..

PAO Skylab Control. We are now getting some temperature data from the various temperature transducers in the orbital workshop area. And they show that temperatures have come down again. The highest temperature now being recorded anywhere in the orbital workshop, or in the spacecraft as a whole, internal temperatures as that in the experimental compartment ceiling 100 degrees even. That is the highest temperature reading any where in the spacecraft. The temperature readings now in the orbital workshop and some of it ducts in the 88 degrees level. So there is a range of temperatures. Still a number of them around 91 92 degrees. And it is quite clear that those temperatures are continuing to come down. This is Skylab Control. We have about 45 seconds left in our pass over Hawaii, and at that time we expect we will hear nothing more from the crew.

PAO Skylab Control, 3 hours 40 minutes and 9 seconds. We are just now going out of range of the Hawaiian tracking station, just now having passed over the horizon. We have lost signal in Hawaii and we do not expect to acquire signal again for another 24 minutes and at which time we'll acquire, we'll acquire signal at Vangurad tracking station off the coast of South America. This is Skylab Control at 3 hours 40 minutes and 29 seconds Greenwich mean time.

END OF TAPE